UNITED STATES DISTRICT COURT EASTERN DISTRICT OF NEW YORK

BRAD HINES, derivatively on behalf of META MATERIALS INC. f/k/a TORCHLIGHT ENERGY RESOURCES, INC.,

Case No.:

Plaintiff,

DEMAND FOR JURY TRIAL

v.

GEORGE PALIKARAS, KENNETH RICE, GREG McCABE, JOHN A. BRDA, ALLISON CHRISTILAW, MAURICE GUITTON, KENNETH HANNAH, STEEN KARSBO, ERIC M. LESLIE, RAM RAMKUMAR, ROBERT LANCE COOK, MICHAEL J. GRAVES, and ALEXANDRE ZYNGIER,

Defendants,

and

META MATERIALS INC. f/k/a
TORCHLIGHT ENERGY RESOURCES, INC.,

Nominal Defendant.

VERIFIED SHAREHOLDER DERIVATIVE COMPLAINT

Plaintiff Brad Hines ("Plaintiff"), by Plaintiff's undersigned attorneys, derivatively and on behalf of nominal defendant Meta Materials Inc. f/k/a Torchlight Energy Resources, Inc. ("Meta Materials" or the "Company"; the term the "Company" refers to the Company both before and after the Merger (defined below) and accompanying name change), files this Verified Shareholder Derivative Complaint against defendants George Palikaras ("Palikaras"), Kenneth Rice ("Rice"), Greg McCabe ("McCabe"), John A. Brda ("Brda"), Allison Christilaw ("Christilaw"), Maurice Guitton ("Guitton"), Kenneth Hannah ("Hannah"), Steen Karsbo

("Karsbo"), Eric M. Leslie ("Leslie"), Ram Ramkumar ("Ramkumar"), Robert Lance Cook ("Cook"), Michael J. Graves ("Graves"), and Alexandre Zyngier ("Zyngier") (collectively, the "Individual Defendants," and together with the Company, the "Defendants") for breaches of their fiduciary duties as current or former directors and/or officers of the Company, unjust enrichment, abuse of control, gross mismanagement, and waste of corporate assets, against the Individual Defendants, except Defendant Rice, for violations of Section 14(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), and against Defendants Palikaras, Rice, McCabe, and Brda for contribution under Sections 10(b) and 21D of the Exchange Act. As for Plaintiff's complaint against the Individual Defendants, Plaintiff alleges the following based upon personal knowledge as to Plaintiff and Plaintiff's own acts, and information and belief as to all other matters, based upon, inter alia, the investigation conducted by and through Plaintiff's attorneys, which included, among other things, a review of the Defendants' public documents, conference calls and announcements made by Defendants, United States Securities and Exchange Commission ("SEC") filings, wire and press releases published by and regarding the Company, legal filings, news reports, securities analysts' reports and advisories about the Company, and information readily obtainable on the Internet. Plaintiff believes that substantial evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

NATURE OF THE ACTION

- 1. This is a shareholder derivative action that seeks to remedy wrongdoing committed by the Company's directors and officers from September 21, 2020 through December 14, 2021 (the "Relevant Period").
- 2. Meta Materials is a Nevada corporation based in Nova Scotia, Canada. According to its Form 10-Q filed with the SEC on November 25, 2021 (the "3Q21 10-Q"), Meta Materials'

"platform technology includes holography, lithography, and medical wireless sensing" comprised of "advanced materials, metamaterials and functional surfaces. These materials include structures that are patterned in ways that manipulate light, heat, and electromagnetic waves in unusual ways." Meta Materials plans to commercialize its materials for "aerospace and defense, automotive, energy, healthcare, consumer electronics, and data transmission" applications, but has yet to produce a widely used commercial product.

- 3. Prior to operating under the name Meta Materials and focusing on developing products made of "advanced materials," the Company was called Torchlight Energy Resources, Inc. ("Torchlight") and was in the oil and gas business.
- 4. In September 2020, Torchlight announced that it would be merging with a privately held company, Metamaterial Inc. ("Metamaterial"), and that following this combination the Company would operate as Meta Materials and would adopt the business approach of Metamaterial rather than Torchlight. In connection with the merger between Torchlight and Metamaterial (the "Merger"), which closed on June 28, 2021, Metamaterial shareholders received shares of the Company in exchange for their Metamaterial shares. After the Merger, former Metamaterial shareholders would own approximately 75% of the Company, and the Company's pre-Merger shareholders—i.e., Torchlight shareholders—would own about 25% of the post-Merger Company, now called Meta Materials. Metamaterial's officers would helm the post-Merger Company and of the seven directors named to lead the Company after the Merger, Metamaterial would nominate five, Torchlight would nominate one, and one would be a joint nominee.
- 5. To promote the Merger and the resulting Company, Torchlight, and later Meta Materials, issued numerous false and misleading statements during the Relevant Period touting

cutting-edge technology that Metamaterial, and later the Company, was supposedly developing. However, Metamaterial, and the post-Merger Company, had numerous problems organizationally and with its products that rendered the statements at issue false and misleading.

- 6. The truth began to emerge in November 2021, when the Company disclosed in its quarterly report filed on Form 10-Q for the period ended September 30, 2021, that the SEC was investigating the terms of the Merger and that Meta Materials had received a subpoena from the SEC regarding the same. The truth fully emerged when, on December 14, 2021, Kerrisdale Capital Management LLC ("Kerrisdale") published a detailed report (the "Kerrisdale Report") cataloguing the many undisclosed problems afflicting the Company.
- 7. On the news contained in the Kerrisdale Report, the price of the Company's common stock fell from closing at \$3.09 per share on December 13, 2021, to close at \$2.91 per share on December 14, 2021, an \$0.18 or a 5.8% decline.
- 8. During the Relevant Period, the Individual Defendants breached their fiduciary duties to the Company by personally making and/or causing the Company to make to the investing public a series of materially false and misleading statements about Meta Materials' (and Metamaterial's) business, operations, and prospects. Specifically, the Individual Defendants willfully or recklessly made and/or caused the Company to make materially false and misleading statements to the investing public that failed to disclose, *inter alia*, that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin Corporation ("Lockheed Martin"); (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense

of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls. As a result of the foregoing, the Company's public statements were materially false and misleading at all relevant times.

- 9. Defendants McCabe, Brda, Cook, Graves, and Zyngier (the "Torchlight Defendants") further breached their fiduciary duties to the Company by causing Torchlight to merge with Metamaterial on terms that were unfavorable to the Company and its pre-Merger shareholders, given the foregoing problems with Metamaterial (this misconduct referred to herein as the "Overpayment Misconduct").
- 10. The Individual Defendants also breached their fiduciary duties by failing to correct and/or causing the Company to fail to correct these false and misleading statements and omissions of material fact to the investing public.
- 11. Additionally, in breach of their fiduciary duties, the Individual Defendants caused the Company to fail to maintain adequate internal controls.
- 12. Moreover, two of the Individual Defendants breached their fiduciary duties by engaging in lucrative insider sales of Company common stock at artificially inflated prices, obtaining collective proceeds of over \$5.7 million.
- 13. In light of the Individual Defendants' misconduct—which has subjected the Company, its Chief Executive Officer ("CEO"), its Chief Financial Officer ("CFO"), its pre-Merger Chairman, and its pre-Merger CEO to being named as defendants in a federal securities fraud class action lawsuit pending in the United States District Court for the Eastern District of New York (the "Securities Class Action"), and has further subjected the Company to an SEC investigation, the need to undertake internal investigations, the need to implement adequate internal controls over its disclosures, losses from the waste of corporate assets, and losses due to

the unjust enrichment of the Individual Defendants who were improperly overcompensated by the Company and/or who benefitted from the wrongdoing alleged herein—the Company will have to expend many millions of dollars.

14. In light of the breaches of fiduciary duty engaged in by the Individual Defendants, many of whom are the Company's current directors, their collective engagement in fraud, the substantial likelihood of the directors' liability in this derivative action and Defendant Palikaras's liability in the Securities Class Action, their being beholden to each other, their longstanding business and personal relationships with each other, and their not being disinterested and/or independent directors, a majority of Meta Materials' Board of Directors (the "Board") cannot consider a demand to commence litigation against themselves and the other Individual Defendants on behalf of the Company with the requisite level of disinterestedness and independence.

JURISDICTION AND VENUE

- 15. This Court has subject matter jurisdiction pursuant to 28 U.S.C. § 1331 because Plaintiff's claims raise a federal question under Section 10(b) of the Exchange Act (15. U.S.C. §§ 78j(b)), Section 14(a) of the Exchange Act (15 U.S.C. § 78n(a)(1)), Rule 14a-9 of the Exchange Act (17 C.F.R. § 240.14a-9), and Section 21D of the Exchange Act (15 U.S.C. § 78u-4(f)). Plaintiff's claims also raise a federal question pertaining to the claims made in the Securities Class Action based on violations of the Exchange Act.
- 16. This Court also has subject matter jurisdiction pursuant to 28 U.S.C. § 1332. Plaintiff and Defendants are citizens of different states and the amount in controversy exceeds the sum or value of \$75,000 exclusive of interest and costs.

- 17. This Court has supplemental jurisdiction over Plaintiff's state law claims pursuant to 28 U.S.C. § 1367(a).
- 18. This derivative action is not a collusive action to confer jurisdiction on a court of the United States that it would not otherwise have.
- 19. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391 and 1401 because a substantial portion of the transactions and wrongs complained of herein occurred in this District, Defendants have conducted business in this District, and Defendants' actions have had an effect in this District.

PARTIES

Plaintiff

- 20. Plaintiff is a current shareholder of Meta Materials common stock. Plaintiff has continuously held Meta Materials common stock at all relevant times.
 - 21. Plaintiff is a citizen of Florida.

Nominal Defendant Meta Materials

- 22. Meta Materials is a Nevada corporation with its principal executive offices located at 1 Research Drive, Dartmouth, Nova Scotia, Canada B2Y 4M9. Meta Materials' shares trade on the Nasdaq Capital Market ("NASDAQ") under the ticker symbol "MMAT."
- 23. Prior to the Merger, the Company was called Torchlight Energy Resources, Inc., its principal executive offices were located at 5700 W. Plano Parkway, Suite 3600, Plano, TX 75093, and its shares were traded on the NASDAQ under the ticker symbol "TRCH."

Defendant Palikaras

24. Defendant Palikaras has served as the Company's CEO and President since the Merger in June 2021. Previously, he served as the CEO and President of Metamaterial from 2011

until the Merger. According to the Company's proxy statement filed on Schedule 14A with the SEC on October 29, 2021 (the "2021 Proxy Statement"), as of October 25, 2021, Defendant Palikaras beneficially owned 32,454,363 shares of the Company's common stock, representing 11.54% of the Company's total outstanding common stock as of that date. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Palikaras beneficially owned approximately \$152 million worth of Meta Materials stock.

- 25. For the fiscal year ended December 31, 2020 (the "2020 Fiscal Year"), Defendant Palikaras received \$330,202 in total compensation from Metamaterial. This included \$161,577 in salary and a \$168,644 bonus.
 - 26. Upon information and belief, Defendant Palikaras is a citizen of Canada.
 - 27. The 2021 Proxy Statement stated the following regarding Defendant Palikaras:

George Palikaras was appointed is the President and CEO of Meta in June 2021, when Meta combined with Torchlight Energy. Mr. Palikaras has held this role at Meta from the beginning of 2011 to June 2021. Mr. Palikaras presently holds no other directorships in publicly traded companies. Mr. Palikaras has received Executive Education at Harvard, INSEAD, UCL and Stanford Business Schools. He earned his BEng. in Computer Engineering, an MSc. in Digital Communication Systems and did his PhD studies in Metamaterial science.

Defendant Rice

28. Defendant Rice has served as the Company's CFO and Executive Vice President ("EVP") since the Merger in June 2021. Previously, he served as the CFO and EVP of Metamaterial from December 2020 until the Merger. According to the 2021 Proxy Statement, as of October 25, 2021, Defendant Rice beneficially owned 553,500 shares of the Company's common stock. Given that the price per share of the Company's common stock at the close of

trading on October 25, 2021 was \$4.68, Defendant Rice owned approximately \$2.6 million worth of Meta Materials stock.

- 29. For the 2020 Fiscal Year, Defendant Rice received \$8,400 in total compensation from Metamaterial, consisting entirely of salary.¹
 - 30. Upon information and belief, Defendant Rice is a citizen of Massachusetts.
 - 31. The 2021 Proxy Statement stated the following about Defendant Rice:

Kenneth Rice. Mr. Rice has served as the Company's Chief Financial Officer and Executive Vice President since June 2021 and served as Chief Financial Officer and Executive Vice President of Metamaterials from December 2020 to June 2021. From April 2016 to March 2019, Mr. Rice held the position of Senior Vice President of LikeMInds, Inc. From April 2019 through November 2020 Mr. Rice was employed as CEO of Alderaan Group, a project management and consulting company. Mr. Rice holds no directorships. Mr. Rice holds a BSBA and an MBA from Babson College, a Juris Doctor from Suffolk University Law School and an LLM in taxation, specialized in international tax from Boston University Law School.

Defendant McCabe

- 32. Defendant McCabe was Chairman of the Board of Torchlight from October 2016 until the Merger. According to the proxy statement that Torchlight filed with the SEC on May 7, 2021 seeking shareholder approval of the Merger (the "Merger Proxy Statement"), as of May 5, 2021, Defendant McCabe beneficially owned 19,605,348 shares of Torchlight common stock, representing about 13.49% of the Company's outstanding common stock at that time. Given that shares of Torchlight common stock were worth \$3.86 per share at the close of trading on May 5, 2021, Defendant McCabe beneficially owned approximately \$76.7 million worth of Company common stock.
 - 33. Upon information and belief, Defendant McCabe is a citizen of Texas.

¹ As mentioned, Defendant Rice joined Metamaterial in December 2020.

34. The proxy statement that the Company filed with the SEC on September 18, 2020 in anticipation of its 2020 shareholder meeting (the "2020 Proxy Statement") stated the following regarding Defendant McCabe:

Gregory McCabe – age 59 – Mr. McCabe has been a member of our Board of Directors since July 2016 and was appointed Chairman of the Board in October 2016. He is an experienced geologist who brings over 36 years of oil and gas experience to our company. He is a principal of numerous oil and gas focused entities including McCabe Petroleum Corporation, Manix Royalty, Masterson Royalty Fund and GMc Exploration. He has been the President of McCabe Petroleum Corporation from 1986 to the present. Mr. McCabe has been involved in numerous oil and gas ventures throughout his career and has a vast experience in technical evaluation, operations and acquisitions and divestitures. Mr. McCabe is also our largest stockholder and provided entry for us into our two largest assets, the Hazel Project in the Midland Basin and the Orogrande Project in Hudspeth County, Texas.

We believe that Mr. McCabe's background in geology and his many years in the oil and gas industry compliments the Board of Directors.

Defendant Brda

- 35. Defendant Brda was a Torchlight director, the Company's Secretary, and the Company's President from January 2012—along with being Torchlight's CEO starting in December 2014—until the Merger. According to the Merger Proxy Statement, as of May 5, 2021, Defendant Brda beneficially owned 2,318,322 shares of Torchlight common stock, representing about 1.60% of the Company's outstanding common stock at that time. Given that the price per share of the Company's common stock at the close of trading on May 5, 2021 was \$3.86, Defendant Brda owned approximately \$8.9 million worth of Company stock.
- 36. According to the Merger Proxy Statement, upon the closing of the Merger, Defendant Brda was entitled to \$43,750 in "golden parachute' compensation," consisting of \$40,000 in cash and \$3,750 in equity. Despite being valued at \$3,750 in the Merger Proxy Statement, Defendant Brda's stock option grant in connection with the Merger covered

2,250,000 shares of Torchlight common stock. According to the 2021 Proxy Statement, Defendant Brda received \$543,644 in total compensation² from Torchlight for the 2020 Fiscal Year. This included \$375,000 in salary and \$168,644 in bonus.

- 37. Upon information and belief, Defendant Brda is a citizen of Missouri.
- 38. The 2020 Proxy Statement stated the following about Defendant Brda:

John A. Brda – age 55 – Mr. Brda has been our Chief Executive Officer since December 2014 and our President, Secretary and a member of the Board of Director since January 2012. He has been the Managing Member of Brda & Company, LLC since 2002, which provided consulting services to public companies—with a focus in the oil and gas sector—on investor relations, equity and debt financings, strategic business development and securities regulation matters, prior to him becoming President of the company.

We believe Mr. Brda is an excellent fit to our Board of Directors and management team based on his extensive experience in transaction negotiation and business development, particularly in the oil and gas sector as well as other non-related industries. He has consulted with many public companies in the last ten years, and we believe that his extensive network of industry professionals and finance firms will contribute to our success.

Defendant Christilaw

39. Defendant Christilaw has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. She is also Chair of the Human Resources and Compensation Committee and a member of both the Audit Committee and the Corporate Governance and Nominating Committee. According to the 2021 Proxy Statement, as of October 25, 2021, Defendant Christilaw beneficially owned 184,500 shares of Company common stock. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Christilaw owned approximately \$863,000 worth of Meta Materials stock.

² The 2021 Proxy Statement lists "\$375,000" as Defendant Brda's total compensation, but also lists his \$375,000 salary and a \$168,644 bonus for that year, which added together produce a total compensation figure of \$543,644.

- 40. According to the 2021 Proxy Statement, Defendant Christilaw is entitled to \$11,250 in cash fees for every quarter she serves as a director.
 - 41. Upon information and belief, Defendant Christilaw is a citizen Canada.
 - 42. The 2021 Proxy Statement stated the following about Defendant Christilaw:

Allison Christilaw has served as a director of the Company since June 2021 and served as a director of Meta from March 2020 to June 2021. From November 2014 to November 2018, Ms. Christilaw was CEO of Reddin Global Inc., a management consulting company. From November 2018 to present, Ms. Christilaw has been an independent consultant. Ms. Christilaw has served as a director of Meta since March of 2020. Since September 2015 she has also held a position on the Appleby College Board of Governors and on the Haltech Regional Innovation Centre Board of Directors since 2019. Ms. Christilaw holds a Bachelor of Arts in Honors Business Administration and a Masters degree in Business Administration from the Richard Ivey School of Business at Western University.

Defendant Guitton

- 43. Defendant Guitton has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also a member of both the Audit Committee and the Corporate Governance and Nominating Committee. According to the 2021 Proxy Statement, as of October 25, 2021, Defendant Guitton beneficially owned 1,202,516 shares of Company common stock. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Guitton owned approximately \$5.6 million worth of Meta Materials stock.
- 44. According to the 2021 Proxy Statement, Defendant Guitton is entitled to \$11,250 in cash fees for every quarter he serves as a director.
 - 45. Upon information and belief, Defendant Guitton is a citizen of Canada.
 - 46. The 2021 Proxy Statement stated the following about Defendant Guitton:

Maurice Guitton has served as a director of the Company since June 2021 and served as a director of Meta from March 2020 to June 2021. Since November 2011, Maurice has been the President and CEO of Versa Tech Consulting

Limited, a consulting company focused on advising its clients on composite materials. He served as Chairman of the board of Snipp Interactive which is listed on the TMX from 2014 to 2018. Mr. Guitton has no other directorships at present.

Defendant Hannah

- 47. Defendant Hannah has served as a Company director since the June 2021 Merger. He is also Chair of the Audit Committee.
- 48. According to the 2021 Proxy Statement, Defendant Hannah is entitled to \$11,250 in cash fees for every quarter he serves as a director.
 - 49. Upon information and belief, Defendant Hannah is a citizen of Missouri.
 - 50. The 2021 Proxy Statement stated the following about Defendant Hannah:

Ken Hannah has served as a director of the Company since June 2021. Mr. Hannah has held the positions of Senior Vice President, Chief Financial Officer of Caleres since February 2015. Executive Vice President and Chief Financial Officer of JC Penney Company, Inc. from May 2012 to March 2014. Mr. Hannah does not hold any Board positions in public companies other than META. Mr. Hannah holds a Masters degree in Business Administration from Saint Louis University and a Bachelor of Science from Southern Illinois University, Carbondale.

Defendant Karsbo

- 51. Defendant Karsbo has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also Chair of the Corporate Governance and Nominating Committee and a member of the Human Resources and Compensation Committee. According to the 2021 Proxy Statement, as of October 25, 2021, Defendant Karsbo beneficially owned 184,500 shares of Company common stock. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Karsbo owned approximately \$863,000 worth of Meta Materials stock.
- 52. According to the 2021 Proxy Statement, Defendant Karsbo is entitled to \$11,250 in cash fees for every quarter he serves as a director.

- 53. Upon information and belief, Defendant Karsbo is a citizen of Denmark.
- 54. The 2021 Proxy Statement stated the following about Defendant Karsbo:

Steen Karsbo as served as a director of the Company since June 2021 and served as a director of Meta from March 2020 to June 2021. From July 1980 through June 2019 Mr. Karsbo was employed at Satair A/S/Airbus in a variety of senior management roles. Mr. Karsbo holds no other directorships than his role as a director of the Company.

Defendant Leslie

- 55. Defendant Leslie has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also a member of the Human Resources and Compensation Committee. According to the 2021 Proxy Statement, as of October 25, 2021, Defendant Leslie beneficially owned 1,306,127 shares of Company common stock. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Leslie owned approximately \$6.1 million worth of Meta Materials stock.
- 56. According to the 2021 Proxy Statement, Defendant Leslie is entitled to \$11,250 in cash fees for every quarter he serves as a director.
 - 57. Upon information and belief, Defendant Leslie is a citizen of Canada.
 - 58. The 2021 Proxy Statement stated the following about Defendant Leslie:

Eric Leslie has served as a director of the Company since June 2021 and served as a director of Meta from March 2020 to June 2021. From November 2015 through the present, he has held the position of President and CEO of TRION Energy Solutions Corporation. Mr. Leslie does not presently hold any other board memberships. Mr. Leslie holds a Bachelor of Arts from Western University.

Defendant Ramkumar

59. Defendant Ramkumar has served as a Chairman of the Board since the June 2021 Merger and was Metamaterial's Chairman from March 2020 until the Merger. According to the

- 2021 Proxy Statement, as of October 25, 2021, Defendant Ramkumar beneficially owned 702,743 shares of Company common stock. Given that the price per share of the Company's common stock at the close of trading on October 25, 2021 was \$4.68, Defendant Ramkumar owned approximately \$3.2 million worth of Meta Materials stock.
- 60. According to the 2021 Proxy Statement, Defendant Ramkumar is entitled to \$15,000 in cash fees for every quarter he serves as Chairman.
 - 61. Upon information and belief, Defendant Ramkumar is a citizen of Canada.
 - 62. The 2021 Proxy Statement stated the following about Defendant Ramkumar:

Ram Ramkumar has served as a director and Chairman of the Board since June 2021 and served as a director and Chairman of the board of directors of Meta from March 2020 to June 2021. He served as Chairman of the board of Snipp Interactive which is listed on the TMX from 2014 to 2018. He was a director of Continental Precious Minerals ("CPM"), a TMX listed company from 2017 until March 2020 when CPM combined with Metamaterials Inc. Mr. Ramkumar has a Bachelor of Technology (Metallurgical Engineering) and Master of Business Administration from the University of Toronto and was a chartered accountant.

Defendant Cook

- 63. Defendant Cook was a director at Torchlight from February 2019 until the Merger. According to the Merger Proxy Statement, as of May 5, 2021, Defendant Cook beneficially owned 300,000 shares of Torchlight common stock at that time. Given that shares of Torchlight common stock were worth \$3.86 per share at the close of trading on May 5, 2021, Defendant Cook beneficially owned approximately \$1.1 million worth of Company common stock.
- 64. For the 2020 Fiscal Year, Defendant Cook received \$40,685 in total compensation from the Company, including \$17,935 in fees earned and accrued in 2020 and \$22,750 in option awards.
 - 65. Upon information and belief, Defendant Cook is a citizen of Texas.

66. The 2020 Proxy Statement stated the following regarding Defendant Cook:

Robert Lance Cook – age 64 – Mr. Cook has been a member of our Board of Directors since February 2019. He is currently the Vice President of Production Operations of WellsX Corp., a position he has held since July 2018. WellsX provides hydraulic fracturing and related oilfield services. Additionally, he has been the Managing Partner of Metis Energy LLC since January 2017, which owns and operates oil and gas wells in Texas as well as holds proprietary intellectual properties. Further, he is the President of Sage Geosystems LLC, a company founded in Texas in 2020 which has developed a proprietary geothermal process which is currently seeking funding for field trials. Prior to holding these positions, Mr. Cook worked for Shell Oil Company and its subsidiaries for over 36 years, retiring from the company in September 2016. He held numerous management and engineering positions for Shell, including most recently Chief Scientist for Wells and Production Technology and Chief Operations Officer for SWMS JV with Great Wall Drilling Company from January 2012 until his retirement. He holds a Bachelor of Science in Petroleum Engineering from the University of Texas.

We believe Mr. Cook's wide-ranging experience in operating exploration and production companies makes him an excellent fit to the Board of Directors.

Defendant Graves

- 67. Defendant Graves was a director at Torchlight from August 2017 until the Merger. According to the Merger Proxy Statement, as of May 5, 2021, Defendant Graves beneficially owned 745,000 shares of Torchlight common stock at that time. Given that shares of Torchlight common stock were worth \$3.86 per share at the close of trading on May 5, 2021, Defendant Graves beneficially owned approximately \$2.9 million worth of Company common stock.
- 68. For the 2020 Fiscal Year, Defendant Graves received \$40,685 in total compensation from the Company, including \$17,935 in fees earned and accrued in 2020 and \$22,750 in option awards.

69. During the period when the Company materially misstated information to the investing public to keep the stock price inflated, and before the scheme was exposed, Defendant Graves made the following sale of Company stock at artificially inflated prices:

Date	Shares Sold	Avg. Price Per Share	Proceeds
July 9, 2021	300,000	\$5.12	\$1,535,100

His insider sale made with knowledge of material nonpublic information before the material misstatements and omissions were exposed demonstrates his motive in facilitating and participating in the scheme.

- 70. Upon information and belief, Defendant Graves is a citizen of Iowa.
- 71. The 2020 Proxy Statement stated the following regarding Defendant Graves:

Michael J. Graves – age 52 – Mr. Graves has served on the Board of Directors since August 17, 2017. He is a Certified Public Accountant, and since 2005 he has been a managing shareholder of Fitch & Graves in Sioux City, Iowa, which provides accounting and tax, financial planning, consulting and investment services. Since 2008, he has also been a registered representative with Western Equity Group where he has worked in investment sales. He is also presently a shareholder in several businesses involved in residential construction and property rentals. Previously, he worked at Bill Markve & Associates, Gateway 2000 and Deloitte & Touche. He graduated Summa Cum Laude from the University of South Dakota with a B.S. in Accounting.

With Mr. Graves' extensive background in accounting and investment businesses, we believe his understanding of financial statements, business valuations, and general business performance are a valuable asset to the Board.

Defendant Zyngier

72. Defendant Zyngier was a director at Torchlight from June 2016 until the Merger. According to the Merger Proxy Statement, as of May 5, 2021, Defendant Zyngier beneficially owned 600,000 shares of Torchlight common stock at that time. Given that shares of Torchlight common stock were worth \$3.86 per share at the close of trading on May 5, 2021, Defendant Zyngier beneficially owned approximately \$2.3 million worth of Company common stock.

- 73. For the 2020 Fiscal Year, Defendant Zyngier received \$40,685 in total compensation from the Company, including \$17,935 in fees earned and accrued in 2020 and \$22,750 in option awards.
- 74. During the period when the Company materially misstated information to the investing public to keep the stock price inflated, and before the scheme was exposed, Defendant Zyngier made the following sale of Company stock at artificially inflated prices:

Date	Shares Sold	Avg. Price Per Share	Proceeds
June 22, 2021	600,000	\$7.00	\$4,200,000

His insider sale made with knowledge of material nonpublic information before the material misstatements and omissions were exposed demonstrates his motive in facilitating and participating in the scheme.

- 75. Upon information and belief, Defendant Zyngier is a citizen of New York.
- 76. The 2020 Proxy Statement stated the following regarding Defendant Zyngier:

Alexandre Zyngier – age 51 – Mr. Zyngier has served on our Board of Directors since June 2016. He has been the Managing Director of Batuta Advisors since founding it in August 2013. The firm pursues high return investment and advisory opportunities in the distressed and turnaround sectors. Mr. Zyngier has over 20 years of investment, strategy, and operating experience. He is currently a director of Atari SA and Applied Minerals, Inc. and certain other private entities. Before starting Batuta Advisors, Mr. Zyngier was a portfolio manager at Alden Global Capital from February 2009 until August 2013, investing in public and private opportunities. He has also worked as a portfolio manager at Goldman Sachs & Co. and Deutsche Bank Co. Additionally, he was a strategy consultant at McKinsey & Company and a technical brand manager at Procter & Gamble. Mr. Zyngier holds an MBA in Finance and Accounting from the University of Chicago and a BS in Chemical Engineering from UNICAMP in Brazil.

We believe that Mr. Zyngier's investment experience and his experience in overseeing a broad range of companies will greatly benefit the Board of Directors.

On August 12, 2019, LootCrate Inc. filed for Chapter 11 bankruptcy in Delaware. Mr. Zyngier is an independent director of LootCrate, Inc. and oversaw the company's filing.

FIDUCIARY DUTIES OF THE INDIVIDUAL DEFENDANTS

- 77. By reason of their positions as officers, directors, and/or fiduciaries of the Company and because of their ability to control the business and corporate affairs of the Company, the Individual Defendants owed the Company and its shareholders fiduciary obligations of trust, loyalty, good faith, and due care, and were and are required to use their utmost ability to control and manage the Company in a fair, just, honest, and equitable manner. The Individual Defendants were and are required to act in furtherance of the best interests of the Company and its shareholders so as to benefit all shareholders equally.
- 78. Each director and officer of the Company owes to Meta Materials and its shareholders the fiduciary duty to exercise good faith and diligence in the administration of the Company and in the use and preservation of its property and assets and the highest obligations of fair dealing.
- 79. The Individual Defendants, because of their positions of control and authority as directors and/or officers of the Company, were able to and did, directly and/or indirectly, exercise control over the wrongful acts complained of herein.
- 80. To discharge their duties, the officers and directors of the Company were required to exercise reasonable and prudent supervision over the management, policies, controls, and operations of the Company.
- 81. Each Individual Defendant, by virtue of their position as a director and/or officer, owed to the Company and to its shareholders the highest fiduciary duties of loyalty, good faith, and the exercise of due care and diligence in the management and administration of the affairs of the Company, as well as in the use and preservation of its property and assets. The conduct of the Individual Defendants complained of herein involves a knowing and culpable violation of their

obligations as directors and officers of the Company, the absence of good faith on their part, or a reckless disregard for their duties to the Company and its shareholders that the Individual Defendants were aware or should have been aware posed a risk of serious injury to the Company. The conduct of the Individual Defendants who were also officers and directors of the Company has been ratified by the remaining Individual Defendants who collectively comprised the Company's Board at all relevant times.

- 82. As senior executive officers and directors of a publicly-traded company whose common stock was registered with the SEC pursuant to the Exchange Act and traded on the NASDAQ, the Individual Defendants had a duty to prevent and not to effect the dissemination of inaccurate and untruthful information with respect to the Company's financial condition, performance, growth, operations, financial statements, business, products, management, earnings, internal controls, and present and future business prospects, and had a duty to cause the Company to disclose in its regulatory filings with the SEC all those facts described in this Complaint that it failed to disclose, so that the market price of the Company's common stock would be based upon truthful and accurate information.
- 83. To discharge their duties, the officers and directors of the Company were required to exercise reasonable and prudent supervision over the management, policies, practices, and internal controls of the Company. By virtue of such duties, the officers and directors of the Company were required to, among other things:
- (a) ensure that the Company was operated in a diligent, honest, and prudent manner in accordance with the laws and regulations of Nevada, Texas, Canada, and the United States, and pursuant to Torchlight's Code of Ethics or Meta Materials' Code of Business Conduct and Ethics (the "Code of Conduct");

- (b) conduct the affairs of the Company in an efficient, business-like manner so as to make it possible to provide the highest quality performance of its business, to avoid wasting the Company's assets, and to maximize the value of the Company's stock;
- (c) remain informed as to how the Company conducted its operations, and, upon receipt of notice or information of imprudent or unsound conditions or practices, to make reasonable inquiry in connection therewith, and to take steps to correct such conditions or practices;
- (d) establish and maintain systematic and accurate records and reports of the business and internal affairs of the Company and procedures for the reporting of the business and internal affairs to the Board and to periodically investigate, or cause independent investigation to be made of, said reports and records;
- (e) maintain and implement an adequate and functioning system of internal legal, financial, and management controls, such that the Company's operations would comply with all applicable laws and the Company's financial statements and regulatory filings filed with the SEC and disseminated to the public and the Company's shareholders would be accurate;
- (f) exercise reasonable control and supervision over the public statements made by the Company's officers and employees and any other reports or information that the Company was required by law to disseminate;
- (g) refrain from unduly benefiting themselves and other Company insiders at the expense of the Company; and
- (h) examine and evaluate any reports of examinations, audits, or other financial information concerning the financial affairs of the Company and to make full and

accurate disclosure of all material facts concerning, *inter alia*, each of the subjects and duties set forth above.

- 84. Each of the Individual Defendants further owed to the Company and the shareholders the duty of loyalty requiring that each favor the Company's interests and that of its shareholders over their own while conducting the affairs of the Company and refrain from using their position, influence, or knowledge of the affairs of the Company to gain personal advantage.
- 85. At all times relevant hereto, the Individual Defendants were the agents of each other and of the Company and were at all times acting within the course and scope of such agency.
- 86. Because of their advisory, executive, managerial, and directorial positions with the Company, each of the Individual Defendants had access to adverse, nonpublic information about the Company.
- 87. The Individual Defendants, because of their positions of control and authority, were able to and did, directly or indirectly, exercise control over the wrongful acts complained of herein, as well as the contents of the various public statements issued by Meta Materials.

CONSPIRACY, AIDING AND ABETTING, AND CONCERTED ACTION

- 88. In committing the wrongful acts alleged herein, the Individual Defendants have pursued, or joined in the pursuit of, a common course of conduct, and have acted in concert with and conspired with one another in furtherance of their wrongdoing. The Individual Defendants caused the Company to conceal the true facts as alleged herein. The Individual Defendants further aided and abetted and/or assisted each other in breaching their respective duties.
- 89. The purpose and effect of the conspiracy, common enterprise, and/or common course of conduct was, among other things, to facilitate and disguise the Individual Defendants'

violations of law, including breaches of fiduciary duty, unjust enrichment, abuse of control, gross

mismanagement, waste of corporate assets, and violations of the Exchange Act.

90. The Individual Defendants accomplished their conspiracy, common enterprise,

and/or common course of conduct by causing the Company purposefully, recklessly, or

negligently to conceal material facts, fail to correct such misrepresentations, and violate

applicable laws. In furtherance of this plan, conspiracy, and course of conduct, the Individual

Defendants collectively and individually took the actions set forth herein. Because the actions

described herein occurred under the authority of the Board, each of the Individual Defendants

who was a director of the Company was a direct, necessary, and substantial participant in the

conspiracy, common enterprise, and/or common course of conduct complained of herein.

91. Each of the Individual Defendants aided and abetted and rendered substantial

assistance in the wrongs complained of herein. In taking such actions to substantially assist the

commission of the wrongdoing complained of herein, each of the Individual Defendants acted

with actual or constructive knowledge of the primary wrongdoing, either took direct part in, or

substantially assisted the accomplishment of that wrongdoing, and was or should have been

aware of their overall contribution to and furtherance of the wrongdoing.

92. At all times relevant hereto, each of the Individual Defendants was the agent of

each of the other Individual Defendants and of the Company and was at all times acting within

the course and scope of such agency.

THE COMPANY'S CODE OF CONDUCT AND CORPORATE GOVERNANCE

Torchlight's Code of Ethics

- 93. Prior to the Merger, Torchlight maintained a Code of Ethics that applied to the Company's "principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions."
- 94. The Code of Ethics states that it is "reasonably designed to deter wrongdoing and to promote:"
 - Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
 and
 - Full, fair, accurate, timely, and understandable disclosure in reports and documents that the issuer files with, or submits to, the Commission or other regulatory bodies, and in other public communications made by the issuer; and
 - Compliance with applicable governmental laws, rules and regulations; and
 - The prompt internal reporting of violations of the code to the board of directors or another appropriate person or persons; and
 - Accountability for adherence to the code.
- 95. Moreover, the Code of Ethics provides that applicable personnel must "respect the spirit and the letter of laws, rules and regulations," "comply with the spirit and letter of financial and regulatory disclosure obligations," "comply with the spirit and the letter of insider trading laws," and "strive for full, fair, accurate, timely and understandable disclosure in reports and documents that we file with, or submit to, Securities regulatory agencies and in other public communications made by us."

Code of Conduct

96. The Meta Materials's Code of Conduct provides that "[a]ll directors, officers, employees and contractors . . . must comply with this Code[.]"

- 97. The Code of Conduct further provides that it is "designed to deter wrongdoing and to promote: (1) honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (2) full, fair, accurate, timely, and understandable disclosure in reports and documents that the Company files with, or submits to, applicable securities regulatory authorities and stock exchanges and in other public communications made by the Company; (3) compliance with applicable governmental laws, rules and regulations; (4) the prompt internal reporting of violations of this Code to an appropriate person or persons identified in this Code; and (5) accountability for adherence to this Code."
- 98. The Code of Conduct contains a section titled "Compliance with All Laws, Rules and Regulations" that states, in relevant part:

Meta complies with all laws, rules, and regulations of Canada, the United States and any other countries in which we operate, including the requirements of applicable securities regulatory authorities and stock exchanges on which Meta's securities are listed.

99. The Code of Conduct's "Conflict of Interest" section provides, in relevant part:

You must avoid situations where personal interests could interfere, or appear to interfere, with their duties and responsibilities to or the interests of Meta. A conflict of interest may occur where involvement in any activity impairs or prevents you from performing their duties properly for Meta, or creates, or appears to create, a situation which affects your judgment or ability to act in the best interests of Meta.

100. The Code of Conduct has an "Insider Trading" section that provides, in relevant part:

You and others who are in a "special relationship" with Meta including (but not limited to) friends, relatives and associates ("insiders"), may from time to time become aware of material, non-public information such as corporate developments or plans that may affect the value of Meta's securities ("inside information"). While you are encouraged to become a shareholder on a long-term investment basis, insiders are prohibited from using inside information for

personal profit and must not take advantage of inside information by trading while aware of such inside information, or providing inside information to others or encouraging or recommending that others trade in Meta securities while in possession of insider information.

101. The Code of Conduct section on the "Accuracy of Books and Company Records" reads, in relevant part:

Company records must be kept and maintained to fulfill all applicable legal requirements. Recording and reporting information, including information related to operations, environment, health, safety, training, human resources and financial matters, must be done honestly, accurately and with care.

102. Regarding "Accounting, Auditing, or Disclosure Concerns," the Code of Conduct states, in relevant part:

As a public company, Meta is required to provide full, fair, accurate, timely and understandable disclosure in reports and documents that are filed with, or submitted to, applicable securities regulatory authorities and stock exchanges, as well as in other public communications that we make. All persons responsible for the preparation of Meta's public disclosures (financial and non-financial), or who provide information as part of the process, must ensure that disclosures are prepared and information is provided honestly, accurately and in compliance with our disclosure controls and procedures and internal control over financial reporting.

103. The Code of Conduct states that: "You are personally accountable for learning, endorsing and promoting this Code and applying it to your own conduct and field of work." Moreover, it states that: "Anyone who has a concern about what constitutes ethical conduct or whether a certain course of action violates the Code is expected to raise the concern immediately with their direct supervisor, local HR representative, one of Meta's senior executive officers or otherwise in accordance with the Whistleblower Policy."

Audit Committee Charter

104. The Company's Audit Committee Charter notes that the "primary function of the Audit Committee is to assist the Board and work with management" by "(i) reviewing the

financial statements and reports provided by the Corporation to applicable securities regulators, the Corporation's shareholders or to the general public, (ii) monitoring and overseeing the accounting and financial reporting processes of the Corporation, (iii) monitoring and overseeing the Corporation's internal controls, including internal controls over financial reporting, and (iv) reviewing and overseeing the audits of the Corporation's financial statements."

- 105. Under, "Financial Reporting Processes," the Audit Committee Charter provides for the following:
 - 1. In consultation with the auditor and management, review annually the adequacy of the Corporation's internal financial and accounting controls, including any significant deficiencies and significant changes.
 - 2. Oversee the resolution of issues, if any, between management and the auditor regarding financial reporting.
 - 3. Review and approve all material related party transactions to be disclosed, pursuant to Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions, as applicable, and be responsible for the review and oversight contemplated by CSE as applicable, with respect to any such reported transactions.
 - 4. Assist the Board in ensuring the Corporation's compliance with legal and regulatory requirements related to the Corporation's financial reporting process.
 - 5. Seek to ensure that adequate procedures are in place for the review of Corporation's public disclosure of financial information extracted or derived from Corporation's financial statements, periodically assess the adequacy of those procedures and recommend any proposed changes to the Board for consideration.
- 106. Under, "Internal Controls and Risk Management," the Audit Committee Charter lists the following responsibilities:
 - 8. Review the effectiveness and integrity of internal controls in consultation with the Corporation's external auditor.
 - 9. Review significant financial risks or exposures and assess the steps management has taken to monitor, control and mitigate such risks or exposures.

- 10. Satisfy itself, through discussions with management, that the adequacy of internal controls, systems and procedures has been periodically assessed in order to ensure compliance with regulatory requirements and recommendations.
- 11. Review, and in the Committee's discretion make recommendations to the Board regarding, the adequacy of Corporation's risk management policies and procedures with regard to identification of the Corporation's principal risks and implementation of appropriate systems to manage such risks including an assessment of the adequacy of insurance coverage maintained by the Corporation[.]
- Materials' Code of Conduct by engaging in or permitting the scheme to cause the Company to issue materially false and misleading statements to the investing public, and to facilitate and disguise the Individual Defendants' violations of law, including breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, and violations of the Exchange Act. In addition, the Individual Defendants violated the Code of Ethics or Code of Conduct by failing to act honestly and ethically; to ensure accurate disclosures; to comply with all applicable laws, rules, and regulations; to avoid conflicts of interest and insider sales, and to report known violations of the Code of Ethics and/or Code of Conduct and the law.
- 108. Moreover, the Individual Defendants who served on the Company's Audit Committee during the Relevant Period violated the Audit Committee Charter by engaging in or permitting the scheme to cause the Company to issue materially false and misleading statements to the investing public, and to facilitate and disguise the Individual Defendants' violations of law, including breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, and violations of the Exchange Act. In addition, the Individual Defendants who served on the Company's Audit Committee during the Relevant Period violated the Audit Committee Charter by failing to adequately oversee the integrity of the

Company's public disclosures, to adequately oversee the Company's risk assessments and risk management functions, and to adequately oversee the Company' internal controls.

THE INDIVIDUAL DEFENDANTS' MISCONDUCT

Background

- 109. Meta Materials is a Nevada corporation based in Nova Scotia, Canada. According to the 3Q21 10-Q, Meta Materials' "platform technology includes holography, lithography, and medical wireless sensing. The underlying approach that powers all of the Company's platform technologies comprises advanced materials, metamaterials and functional surfaces. These materials include structures that are patterned in ways that manipulate light, heat, and electromagnetic waves in unusual ways." Meta Materials plans to commercialize its materials for "aerospace and defense, automotive, energy, healthcare, consumer electronics, and data transmission" applications, but it has yet to produce a widely used commercial product.
- 110. In September 2020, the Company, then in the oil and gas business and going by the name Torchlight, announced the forthcoming Merger between Torchlight and Metamaterial—the present Company's operational predecessor—which would result in Meta Materials.
- 111. To promote the Merger and the post-Merger Company, Torchlight, and later Meta Materials, issued numerous false and misleading statements during the Relevant Period touting the nominally cutting-edge technology being developed by Metamaterial and, post-Merger, the Company.
- 112. As an example of the undisclosed issues plaguing Metamaterial, and as would later be revealed by the Kerrisdale Report, Metamaterial had three products in development which it repeatedly touted, and which Meta Materials continued to tout following the Merger:

laser glare protection ("LGP") eyewear called "MetaAir", a protective film called "NanoWeb," and a non-invasive blood glucose sensor.

- 113. However, nothing was as it seemed with these products. Despite the Company highlighting that it had successfully commercialized the MetaAir eyewear in partnership with Satair, an Airbus SE ("Airbus") subsidiary, by December 2021 the Company had filled only C\$34,000 of a \$2 million dollar (USD) order by Satair, despite being paid a \$500,000 advance (~C\$655,000). This meant that the Company had provided Satair with about 50 pairs of glasses, for prices well above what competitors charged for LGP eyewear, and had a large outstanding operating liability due to the advance. Thus, this product was far from successfully commercialized, despite having been in development for seven years.
- 114. Likewise, Metamaterial acquired the right to NanoWeb when it acquired Rolith Incorporated ("Rolith") in 2016. However, key Rolith scientists resigned in 2018 and, as of March 2020, Metamaterial was producing meter-long samples of NanoWeb that were the subject of a 2014 paper by Rolith scientists, indicating that little progress had been made since the acquisition of Rolith in 2016. Additionally, sources at the University of Michigan interviewed by Kerrisdale indicate that Metamaterial stopped paying for an important intellectual property license "years ago." Thus, as with MetaAir, NanoWeb was far from commercialized.
- 115. Thirdly, although in July 2021 the Company announced the conclusion of a 27-month long project to develop a non-invasive glucose sensing prototype, the device depicted in promotional materials was non-existent. Moreover, the project used glucose and water in tests for a prototype ostensibly designed for use on humans, who measure glucose levels in their blood, and the supporting scientific tests used glucose concentrations that ranged 2-50x normal blood-glucose levels.

116. Despite the poor state of Metamaterial's product pipeline and the issues hampering commercialization of its products, the Merger was completed on June 28, 2021, and the Company changed its name from Torchlight to Meta Materials.

The Overpayment Misconduct

- 117. In light of the poor state of affairs at Metamaterial, the Torchlight Defendants breached their fiduciary duties to the Company by causing Torchlight to merge with Metamaterial on terms that were unfavorable to the Company and its pre-Merger shareholders.
- 118. Specifically, the Torchlight Defendants agreed to a merger under which Torchlight's pre-Merger shareholders would own only approximately 25% of the post-Merger Company, despite the post-Merger Company inheriting Metamaterial's problem-riddled operations, rather than Torchlight's pre-Merger operations.
- 119. The Torchlight Defendants were in a position to know the state of Metamaterial prior to the Merger in the course of conducting due diligence, and despite knowing of the poor state of affairs of Metamaterial, they agreed to the Merger on terms that were unreasonable given the true, yet undisclosed, state of affairs.
- 120. Meanwhile, Defendant Brda received, by the Company's own description, a "golden parachute," and Defendants Graves and Zyngier engaged in lucrative insider sales of Company common stock at artificially inflated prices, obtaining collective proceeds of over \$5.7 million.
- 121. Thus, the Torchlight Defendants placed their own self-interest over the interest of the Company and the pre-Merger Company's shareholders, and agreed to the Merger on less favorable terms than were reasonable, given the poor state of Metamaterial, which would only later become publicly-known.

False and Misleading Statements

September 21, 2020 Press Release

122. On September 21, 2020, the Company and Metamaterial issued a joint press release titled "Torchlight and Metamaterial Announce Planned Business Combination." The press release stated, in relevant part:

META has an extensive intellectual property portfolio, a global presence and multiple R&D and product development agreements with government agencies and private enterprises. The combined entity will continue to service a clientele of world-class OEM customers for a range of applications in the automotive, aerospace and defense, energy, consumer electronics and medical markets.

* * *

"META's management, led by George Palikaras has built an extraordinary award-winning cleantech company whose proprietary advanced technologies address multiple markets and improve their customer's capabilities," said Greg McCabe, Torchlights [sic] Chairman.

* * *

META's products are designed and manufactured with environmental sustainability as a high priority. ... META has also partnered with Lockheed Martin and the Canadian Government's Sustainable Development Technology Canada (SDTC) fund to develop metaSOLARTM a new solar energy product suitable for the transportation industry.

Since 2011, approximately CAD [cash available for distribution] \$60MM has been invested in META, yielding a sizable IP portfolio. In 2020 to date, META has been granted 11 new patents. META has a total of 52 granted and 37 pending patent applications, including 26 in the United States and 63 in 18 other countries around the world. META's portfolio comprises 28 patent families, 19 of which are granted.

(Emphasis added.)

December 14, 2020 Press Release

123. On December 14, 2020, the Company and Metamaterial issued a joint press release titled "Metamaterial and Torchlight Sign Definitive Agreement for Business Combination." The press release stated, in relevant part:

"We are very excited to sign the definitive agreement with Metamaterial," stated John Brda, Torchlight's CEO. "We believe this Transaction provides our shareholders with the best opportunity moving forward. *Metamaterial offers proven disruptive technology* with strong environmental, social and governance (ESG) priorities. *This Transaction provides our shareholders with access to the multi-billion-dollar markets that Metamaterial serves*..."

"META's management, led by George Palikaras, has built an extraordinary award-winning cleantech company whose proprietary advanced technologies address multiple markets and improve their customers' capabilities," said Greg McCabe, Torchlight's Chairman.

(Emphasis added.)

May 7, 2021 Merger Proxy Statement

- 124. On April 16, 2021, the Company filed the Merger Proxy Statement with the SEC. Defendants Brda, Cook, Graves, McCabe, and Zyngier solicited the Merger Proxy Statement filed pursuant to Section 14(a) of the Exchange Act, which contained material misstatements and omissions.³
- 125. The Merger Proxy Statement called for Company shareholders to vote to, *inter alia*: approve three proposals necessary to effectuate the Merger and approve, on an advisory basis, the "golden parachute" compensation of, *inter alia*, Defendant Brda.
- 126. The Merger Proxy Statement stated the following regarding Metamaterial's business, in relevant part:

³ Plaintiff's allegations with respect to the misleading statements in the Merger Proxy Statement are based solely on negligence; they are not based on any allegation of reckless or knowing conduct by or on behalf of the Individual Defendants, and they do not allege, and do not sound in, fraud. Plaintiff specifically disclaims any allegations of, reliance upon any allegation of, or reference to any allegation of fraud, scienter, or recklessness with regard to these allegations and related claims.

Meta has generated a portfolio of intellectual property and is now moving toward commercializing products at a performance and price point combination that has the potential to be disruptive in multiple market verticals. Meta's platform technology includes holography, lithography and medical wireless sensing. The underlying approach that powers all of Meta's platform technologies comprises advanced materials, metamaterials and functional surfaces. These materials include structures that are patterned in ways that manipulate light, heat and electromagnetic waves in unusual ways. Meta's advanced structural design technologies and scalable manufacturing methods provide a path to broad commercial opportunities in aerospace, medical, automotive, energy and other industries.

Controlling light, electricity and heat have played key roles in technological advancements throughout history. Advances in electrical and electromagnetic technologies, wireless communications, lasers, and computers have all been made possible by challenging our understanding of how light and other types of energy naturally behave, and how it is possible to manipulate them.

Over the past 20 years, techniques for producing nanostructures have matured, resulting in a wide range of groundbreaking solutions that can control light and heat at very small scales. Some of the areas of advancement that have contributed to these techniques are photonic crystals, nanolithography, plasmonic phenomena and nanoparticle manipulation. From these advances, a new branch of material science has emerged — metamaterials. Metamaterials are composite structures, consisting of conventional materials such as metals and plastics, that are engineered by Meta scientists to exhibit new or enhanced properties relating to reflection, refraction, diffraction, filtering, conductance and other properties that have the potential for multiple commercial applications.

* * *

Meta's platform technology (holography, lithography and medical wireless sensing) is being used to develop potentially transformative and innovative products for: aerospace and defense, automotive, energy, healthcare, consumer electronics, and data transmission. Meta has many product concepts currently in different stages of development with multiple customers in diverse market verticals. Meta's business model is to co-develop innovative products or applications with industry leaders that add value. This approach enables Meta to understand market dynamics and ensure the relevance and need for Meta's products.

(Emphasis added.)

127. Regarding a few of Metamaterial's products more specifically, the Merger Proxy Statement stated, in relevant part:

Meta's principal products that employ holography technology are its metaAIR® laser glare protection eyewear, metaAIR laser protection films for law enforcement and metaOPTIX notch filters. Meta co-developed its metaAIR laser protection eyewear product with Airbus S.A.S. that has been engineered to provide laser glare protection for pilots, military and law enforcement using Meta's holography technology. metaAIR® is a holographic optical filter developed using nano-patterned designs that block and deflect specific colors or wavelengths of light. Meta launched metaAIR® with strategic and exclusive distribution partner, Satair, a wholly owned Airbus company and started producing and selling metaAIR® in April 2019. The scale-up and specification for the raw photopolymer material used to produce the eyewear was successfully finalized in late 2019 and commercialized in 2020.

* * *

Meta's current principal prototype product in lithography technology is its transparent conductive film, NanoWeb[®]. The lithography division operates out of Meta's wholly owned U.S. subsidiary, which can produce meter-long samples of NanoWeb[®], at a small volumes scale, for industry customers/partners.

There are six NanoWeb[®]-enabled products and applications that are currently in early stages of development including NanoWeb[®] for Transparent EMI Shielding, NanoWeb[®] for 5G signal enhancement, NanoWeb Transparent Antennas, NanoWeb[®] for Touch Screen Sensors, NanoWeb[®] for Solar cells and NanoWeb[®] for Transparent Heating to de-ice and de-fog. Currently these products are in the design and prototyping phase and Meta is performing market trials with potential customers.

Throughout 2020, Meta was ordering and upgrading its equipment at its California facility to efficiently supply NanoWeb samples in larger volumes. Meta has entered into a collaboration agreement with Crossover Solutions Inc. to commercialize the NanoWeb-enabled products and applications for the automotive industry and with ADI Technologies to help secure contracts with the U.S. Department of Defense.

* * *

Wireless sensing is the ability to cancel reflections (anti-reflection) from the skin to increase the Signal-to-Noise-Ratio transmitted through body tissue to enable better medical diagnostics. This breakthrough wireless sensing technology is made using proprietary patterned designs, printed on metal-dielectric structures on flexible substrates that act as anti-reflection (impedance-matching) coatings when placed over the human skin in combination with medical diagnostic modalities, such as MRI, ultrasound systems, non-invasive glucometers etc. For example, as a medical imaging application, Meta is developing metaSURFACETM, or RadiWiseTM, an innovation which allows up to 40 times more energy to be

transmitted through the human tissue, instead of being reflected. The benefit is increased diagnostic speed and imaging accuracy leading to patient throughput increases for healthcare providers. The metaSURFACETM device consists of proprietary non-ferrous metallic and dielectric layers that are exactingly designed to interact (resonate) with radio waves allowing the waves to "see-through the skin."

Meta is developing wireless sensing applications from its London, UK office and advancing the wireless sensing technology with Innovate UK grants.

(Emphasis added.)

- 128. Defendants Brda, Cook, Graves, McCabe, and Zyngier caused the Merger Proxy Statement to be false and misleading, with regard to the statements in ¶¶ 126–27 by failing to disclose that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls.
- 129. As a result of Defendants Brda, Cook, Graves, McCabe, and Zyngier causing the Merger Proxy Statement to be false and misleading, Company shareholders voted, *inter alia*, to approve the three proposals necessary to effectuate the Merger and approve, on an advisory basis, the "golden parachute" compensation of, *inter alia*, Defendant Brda who was breaching his fiduciary duties to the Company.

June 2021 Prospectus Supplements

130. On June 16, 2021, the Company filed a prospectus supplement on Form 424B5 with the SEC. This prospectus supplement stated, in relevant part: "*Meta's advanced structural*

design technologies and scalable manufacturing methods provide a path to broad commercial opportunities in aerospace, medical, automotive, energy and other industries." (Emphasis added.)

131. On June 21, 2021, the Company filed another prospectus supplement on Form 424B5 with the SEC. This prospectus supplement stated, in relevant part: "Meta's advanced structural design technologies and scalable manufacturing methods provide a path to broad commercial opportunities in aerospace, medical, automotive, energy and other industries." (Emphasis added.)

July 6, 2021 Press Release

132. On July 6, 2021, the Company issued a press release titled, "Meta Completes UK-Funded Projects towards Developing Non-Invasive Glucose Sensing System." The press release stated, in relevant part:

Meta Materials Inc. (the "Company" or "META®") (NASDAQ:MMAT) a developer of high-performance functional materials and nanocomposites, today announced the conclusion of a 27-month long project to develop a non-invasive glucose sensing prototype, which combined radio wave and optical sensors to improve accuracy in predicting glucose level changes. . . .



... Preliminary results of the project, using an early prototype system, were published in the journal Sensors (https://doi.org/10.3390/s21093275), which may also be found on META's website under Applications / Medical Applications. The novel multiwavelength biosensing technology is protected with two patent applications filed in 2021 and extends the previous research work on this topic

resulting in a total of 5 patent families, comprising 11 international patents (4 granted, 7 pending).

(Emphasis added.)

August 13, 2021 Form 10-Q

- 133. On August 13, 2021, the Company filed a quarterly report on Form 10-Q for the period ended June 30, 2021 with the SEC (the "2Q21 10-Q"). The 2Q21 10-Q was signed by Defendants Palikaras and Rice and contained certifications pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act and the Sarbanes-Oxley Act of 2002 ("SOX") which were also signed by Defendants Palikaras and Rice attesting to the accuracy of the 2Q21 10-Q, the disclosure of any material changes to the Company's internal controls, and the disclosure of any fraud committed by the Company, its officers, or its directors.
- 134. The 2Q21 10-Q stated the following, in relevant part, about the Company's products:

BUSINESS AND OPERATIONAL OVERVIEW

The Company has generated a portfolio of intellectual property and is now moving toward commercializing products at a performance and price point combination that has the potential to be disruptive in multiple market verticals. The Company's platform technology includes holography, lithography, and medical wireless sensing... The Company's advanced structural design technologies and scalable manufacturing methods provide a path to broad commercial opportunities in aerospace and defense, automotive, energy, healthcare, consumer electronics, and data transmission.

* * *

Meta's principal products that employ holography technology are its METAAIR® laser glare protection eyewear, METAAIR® laser protection films for law enforcement and metaOPTIXTM notch filters. Meta co-developed its METAAIR® laser protection eyewear product with Airbus S.A.S. that has been engineered to provide laser glare protection for pilots, military and law enforcement using Meta's holography technology. METAAIR® is a holographic optical filter developed using nano-patterned designs that block and deflect specific colors or wavelengths of light. *Meta launched METAAIR® with*

strategic and exclusive distribution partner, Satair, a wholly owned Airbus company and started producing and selling METAAIR® in April 2019. The scale-up and specification for the raw photopolymer material used to produce the eyewear was successfully finalized in late 2019 and commercialized in 2020. Meta launched its laser protection films for law enforcement use in late 2020. These films are designed to be applied to face shields and helmet visors providing the wearer with the same type of laser eye protection afforded to pilots by METAAIR® glasses while preserving peripheral vision critical to law enforcement duties.

* * *

The Company's current principal prototype product in lithography technology is its transparent conductive film, NANOWEB®. The lithography division operates out of the Company's wholly owned U.S. subsidiary, which can produce meter-long samples of NANOWEB®, at a small volumes scale, for industry customers/partners.

There are six NANOWEB®-enabled products and applications that are currently in early stages of development including NANOWEB® for Transparent EMI Shielding, NANOWEB® for Transparent Antennas, NANOWEB® for 5G signal enhancement, NANOWEB® for Touch Screen Sensors, NANOWEB® for Solar cells and NANOWEB® for Transparent Heating to de-ice and de-fog. More details of these products and applications can be found in META's EDGAR filings and on META's website at www.metamaterial.com.

Throughout 2020 and 2021, the Company has been ordering and upgrading its equipment at its California facility to efficiently supply NANOWEB® samples in larger volumes. The Company has entered into a collaboration agreement with Crossover Solutions Inc. to commercialize the NANOWEB®- enabled products and applications for the automotive industry and with ADI Technologies to help secure contracts with the US Department of Defense.

Wireless Sensing Technology

Wireless Sensing is the ability to cancel reflections (anti-reflection) from the skin to increase the Signal-to-Noise- Ratio ("SNR") transmitted through body tissue to enable better medical diagnostics. This breakthrough wireless sensing technology is made using proprietary patterned designs, printed on metal-dielectric structures on flexible substrates that act as anti-reflection (impedance-matching) coatings when placed over the human skin in combination with medical diagnostic modalities, such as MRI, ultrasound systems, non-invasive glucometers etc. For example, as a medical imaging application, the Company is developing metaSURFACETM (also known as RadiWiseTM) an innovation which allows up to 40 times more energy to be transmitted through the human tissue, instead of being reflected. The benefit is increased diagnostic speed and imaging

accuracy leading to patient throughput increases for healthcare providers. The metaSURFACETM device consists of proprietary non-ferrous metallic and dielectric layers that are exactingly designed to interact (resonate) with radio waves allowing the waves to "see-through the skin".

(Emphasis added.)

135. The statements identified in ¶¶ 122–23 and 130–34 were materially false and misleading, and failed to disclose material facts necessary to make the statements made not false and misleading. Specifically, the Individual Defendants improperly failed to disclose, *inter alia*, that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls. As a result of the foregoing, the Company's public statements were materially false and misleading at all relevant times.

October 29, 2021 Proxy Statement

136. On October 29, 2021, the Company filed the 2021 Proxy Statement with the SEC. Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar solicited the 2021 Proxy Statement filed pursuant to Section 14(a) of the Exchange Act, which contained material misstatements and omissions.⁴

⁴ Plaintiff's allegations with respect to the misleading statements in the 2021 Proxy Statement are based solely on negligence; they are not based on any allegation of reckless or knowing conduct by or on behalf of the Individual Defendants, and they do not allege, and do not sound in, fraud. Plaintiff specifically disclaims any allegations of, reliance upon any allegation of, or reference to any allegation of fraud, scienter, or recklessness with regard to these allegations and related claims.

- 137. The 2021 Proxy Statement called for Company shareholders to vote to, *inter alia*: (1) elect Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar to the Board and (2) approve the 2021 Equity Incentive Plan (the "2021 Plan").
- 138. The 2021 Proxy Statement stated the following regarding the Board's role in risk oversight at the Company:

Management is responsible for day-to-day risk management at our company. The role of the Board is to provide oversight of the processes designed to identify, assess and monitor key risks and risk mitigation activities. The Board fulfills its risk oversight responsibilities through (i) the receipt of reports directly from management and (ii) the receipt of reports from each committee chair regarding such committee's oversight of specific risk topics.

Delegation of Risk Oversight

The Board has delegated oversight of specific risk areas to its committees. For example, the Audit Committee is tasked with overseeing risk management at our company with respect to financial matters and the adequacy of our internal control over financial reporting. Pursuant to its charter, the Audit Committee is required, among other things, to discuss with management our policies with respect to risk assessment and risk management, including guidelines and procedures to govern the process by which risk assessment and risk management are handled, and to review our major risk exposures and the steps management has taken to monitor, control and report such exposures. The Audit Committee typically has these discussions with management at least once per quarter, and the Chair of the Audit Committee subsequently reports on these discussions to the full Board. Similarly, the Human Resources and Compensation Committee assists the Board in overseeing risks arising from our compensation policies and practices, and the Corporate Governance and Nominating Committee assists the Board in overseeing risks associated with corporate governance, director and executive officer succession planning, board membership and board structure. The Board then discusses significant risk management issues with the Chief Executive Officer and recommends appropriate action.

139. The 2021 Proxy Statement also said the following regarding the Company's Code of Conduct:

We have adopted a written Code of Business Conduct and Ethics applicable to the Board and our officers and employees, including our principal executive officer, principal financial officer and principal accounting officer, in accordance with the rules of the Nasdaq and the SEC. The Code of Business Conduct and Ethics is available on our website at https://investors.metamaterial.com/esg.

140. In asking shareholders to vote to approve the 2021 Plan, the 2021 Proxy stated as follows:

The stockholders are being asked to approve the 2021 Plan so that we may use our 2021 Plan to retain and attract the best available personnel for positions of substantial responsibility, to provide additional incentives to our employees, directors and consultants and to promote the success of our business. If stockholders approve the 2021 Plan, then the Pool will be available for issuance to our employees, directors and our service providers.

* * *

Our board of directors believe that our success depends on the ability to attract and retain the best available personnel and that the ability to grant equity awards is crucial to recruiting and retaining the services of such individuals. In addition, our board of directors believes that equity awards align the interests of service providers and stockholders by giving service providers an ownership stake in the company, motivate service providers to achieve outstanding performance, and provide an effective means of rewarding service providers for their contributions to our success.

If stockholders approve the 2021 Plan, then the Pool would be available to be issued to our service providers. If stockholders do not approve the 2021 Plan, the we would continue to grant equity awards to our employees and service providers under our Prior Plans, but we will be limited to 9,955,745 shares which our board of directors feels will not be sufficient to adequately incentivize our current employees and service providers or for our future growth.

As a result of the above, it would be challenging to attract and retain talent. Furthermore, we will be unable to continue our equity incentive program and we will have to restructure our existing compensation programs for reasons that are not directly related to the achievement of our business objectives, which could prevent us from successfully attracting and retaining highly skilled executive officers and other service providers. To remain competitive without equity-based compensation arrangements, it likely will be necessary to replace components of compensation previously awarded in equity with cash. We do not believe increasing cash compensation to make up for any shortfall in equity compensation would be practical or advisable, because we believe that a combination of equity awards and cash compensation provide a more effective compensation strategy than cash alone for attracting, retaining and motivating our employees long-term and aligning employees' and stockholders' interests. In addition, any significant increase in cash compensation in lieu of equity awards

could substantially increase our operating expenses and reduce our cash flow from operations, which could adversely affect our business results and could adversely affect our business strategy, including using cash flow for strategic acquisitions, research and development of innovative new products, and improvements in the quality and performance of existing products.

- Ramkumar caused the 2021 Proxy Statement to be false and misleading, with regard to the statements in ¶¶ 138–40 by failing to disclose that: (1) the Board's, and its committees', risk oversight functions were not being exercised as described, as evidenced by the occurrence of the wrongdoing alleged herein, which involved members of the Board; (2) though the 2021 Proxy Statement claimed the Company's Code of Conduct applied to the Company's officers and directors, the Individual Defendants violated the Code of Conduct with impunity; and (3) rather than seeking approval of the 2021 Plan merely to attract, retain, and incentivize talent, Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar were improperly interested in increasing the compensation they could receive from the Company by seeking shareholder approval of the 2021 even as they breached their fiduciary duties to the Company.
- Ramkumar caused the 2021 Proxy Statement to be false and misleading, and failed to disclose material facts necessary to make the statement made not false and misleading, because the 2021 Proxy Statement failed to disclose: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the

expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls.

143. As a result of Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar causing the 2021 Proxy Statement to be false and misleading, Company shareholders voted, *inter alia*: (1) to elect Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar, even though they were breaching their fiduciary duties to the Company, and (2) to approve the 2021 Plan, granting Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, Ramkumar, and Rice further unjust compensation even as they breached their fiduciary duties to the Company.

The Truth Begins to Emerge as the False and Misleading Statements Continue

- 144. The truth began to emerge on November 15, 2021, after the market had closed, when the Company filed the 3Q21 10-Q with the SEC. The 3Q21 10-Q was signed by Defendants Palikaras and Rice and contained SOX certifications signed by Defendants Palikaras and Rice attesting to the accuracy of the 3Q21 10-Q, the disclosure of any material changes to the Company's internal controls, and the disclosure of any fraud committed by the Company, its officers, or its directors.
- 145. The 3Q21 10-Q revealed that the SEC had sent the Company a subpoena related to the Merger stating:

In September 2021, the Company received a subpoena from the Securities and Exchange Commission, Division of Enforcement, in a matter captioned *In the Matter of Torchlight Energy Resources, Inc.* The subpoena requests that the Company produces certain documents and information related to, among other things, the merger involving Torchlight Energy Resources, Inc. and Metamaterial Inc. The Company is cooperating and intends to continue to cooperate with the SEC's investigation. The Company can offer no assurances as to the outcome of this investigation or its potential effect, if any, on the Company or its results of operation.

- 146. On this news the Company's stock price dropped from \$4.77 per share at the close of trading on November 15, 2021 to close November 16, 2021 at \$4.58 per share, a decline of \$0.19 or approximately 4.0%.
- 147. Despite the disclosure of the subpoena from the SEC in the 3Q21 10-Q, the 3Q21 10-Q also made false and misleading statements to continue to hide the full truth from public view. Specifically, the 3Q21 10-Q stated the following of the Company's products, in relevant part:

BUSINESS AND OPERATIONAL OVERVIEW

The Company has generated a portfolio of intellectual property and is now moving toward commercializing products at a performance and price point combination that has the potential to be disruptive in multiple market verticals. The Company's platform technology includes holography, lithography, and medical wireless sensing. . . . The Company's advanced structural design technologies and scalable manufacturing methods provide a path to broad commercial opportunities in aerospace and defense, automotive, energy, healthcare, consumer electronics, and data transmission.

* * *

META's principal products that employ holography technology are its METAAIR® laser glare protection eyewear, METAAIR® laser protection films for law enforcement and METAOPTIXTM notch filters. META co-developed its METAAIR® laser glare protection eyewear product with Airbus S.A.S. that has been engineered to provide laser glare protection for pilots, military and law enforcement using META's holography technology. METAAIR® is a holographic optical filter developed using nano-patterned designs that block and deflect specific colors or wavelengths of light. META launched METAAIR® with strategic and exclusive distribution partner, Satair, a wholly owned Airbus company and started producing and selling METAAIR® in April 2019. The scale-up and specification for the raw photopolymer material used to produce the eyewear was successfully finalized in late 2019 and commercialized in 2020. META launched its laser glare protection films for law enforcement use in late 2020. These films are designed to be applied to face shields and helmet visors providing the wearer with the same type of laser eye protection afforded to pilots by METAAIR® glasses while preserving peripheral vision critical to law enforcement duties. METAOPTIXTM notch filters are optical filters that selectively reject a portion of the spectrum, while transmitting all other wavelengths. They are used in applications where it is necessary to block light from a laser, as in machine vision applications and in confocal or multi-photon microscopy, laser-based fluorescence instrumentation, or other life science applications. METAOPTIXTM notch filters were commercially launched by the Company in November 2020.

* *

The Company's current principal prototype product in lithography technology is its transparent conductive film, NANOWEB®. The lithography division operates out of the Company's wholly owned U.S. subsidiary, which can produce meter-long samples of NANOWEB®, at a small volumes scale, for industry customers/partners.

There are six NANOWEB®-enabled products and applications that are currently in early stages of development including NANOWEB® for Transparent EMI Shielding, NANOWEB® for Transparent Antennas, NANOWEB® for 5G signal enhancement, NANOWEB® for Touch Screen Sensors, NANOWEB® for Solar cells and NANOWEB® for Transparent Heating to de-ice and de-fog. More details of these products and applications can be found in META's EDGAR filings and on META's website at www.metamaterial.com.

Throughout 2020 and 2021, the Company has been ordering and upgrading its equipment at its California facility to efficiently supply NANOWEB® samples in larger volumes. The Company has entered into a collaboration agreement with Crossover Solutions Inc. to commercialize the NANOWEB® enabled products and applications for the automotive industry and with ADI Technologies to help secure contracts with the US Department of Defense.

Wireless Sensing Technology

Wireless Sensing is the ability to cancel reflections (anti-reflection) from the skin to increase the Signal-to-Noise- Ratio ("SNR") transmitted through body tissue to enable better medical diagnostics. This breakthrough wireless sensing technology is made using proprietary patterned designs, printed on metal-dielectric structures on flexible substrates that act as anti-reflection (impedance-matching) coatings when placed over the human skin in combination with medical diagnostic modalities, such as MRI, ultrasound systems, non-invasive glucometers etc. For example, as a medical imaging application, the Company is developing metaSURFACETM (also known as RadiWiseTM) an innovation which allows up to 40 times more energy to be transmitted through the human tissue, instead of being reflected. The benefit is increased diagnostic speed and imaging accuracy leading to patient throughput increases for healthcare providers. The metaSURFACETM device consists of proprietary non-ferrous metallic and dielectric layers that are exactingly designed to interact (resonate) with radio waves allowing the waves to "see-through the skin".

(Emphasis added.)

148. The statements identified in ¶¶ 144 and 147 were materially false and misleading, and failed to disclose material facts necessary to make the statements made not false and misleading. Specifically, the Individual Defendants improperly failed to disclose, *inter alia*, that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls. As a result of the foregoing, the Company's public statements were materially false and misleading at all relevant times.

The Truth Fully Emerges

149. On December 14, 2021, while the market was open, Kerrisdale published the Kerrisdale Report. The Kerrisdale Report revealed that "Meta has habitually made outlandish and misleading claims about the feasibility, development, and commercial potential of various technologies only to repeatedly move the goalposts or retrospectively alter its claims, often just quietly dropping entire projects they had previously touted as pivotal." (Emphasis added.) The Kerrisdale Report further revealed that:

Meta's public company filings and website portray an "advanced materials and photonics company... seeking to harness the power of light" in three areas: holography, lithography, and wireless sensing. But as we discuss at length below, Meta's three current "businesses" have generated just about zero product revenue over the last ten years despite continuously making grandiose product development claims. We expect this trend to continue given that the company has never actually commercialized anything.

* * *

Before assessing whether there's any commercial substance to these segments (in short: no), it's instructive to examine the quiet failure of Meta's early technological forays and the creative ways Meta was able to finance a façade of scientific accomplishment with no legitimate underpinning.

* * *

[Meta] deceptively promoted its early endeavors, seemingly in the pursuit of funding that almost certainly would not have been forthcoming if the truth were known to Meta's counterparties. The company's current operations range from the dismal failure of LGP glasses to the empty husk of the once-interesting NanoWeb to the outright falsehoods being told to promote non-existent medical devices. If that weren't enough, the questionable circumstances around its reverse merger with Torchlight – tainted by a dubious CFO appointment, promotional social media buzz, and purposely muddied disclosures around suspiciously successful capital raises – make our assessment that much more damning. . . . Holograms and thin films are a fitting metaphor for Meta: a company that looks interesting at first glance but turns out to be a hollow illusion behind a flimsy veneer of aggressive promotion.

(Emphasis added.)

150. The Kerrisdale Report further revealed the Company's practice of overstating it relationships with other entities, such as Lockheed Martin, as follows:

Meta's description of the Lambda Solar segment remained unchanged from 2017 to 2020, prominently promoting the Lockheed "partnership" but never actually indicating any progress towards development of a product. Currently, Meta's website description of its solar business is the same one it's presented since 2014, except it's no longer call "Lambda Solar." The consistent description of the relationship with Lockheed as a "partnership" is also directly at odds with the contract, in which Lockheed stipulates that the agreement "is not intended to constitute, give effect to, or otherwise create a joint venture, partnership, teaming agreement or other business entity of any kind. [emphasis added]" [sic]

* * *

Meta Materials creatively financed itself through research grants and customer deposits that were never earned, and more recently through reverse mergers

* * *

In July of 2018, Satair, a subsidiary of Airbus that distributes aircraft parts and equipment, signed a \$2 million (USD) purchase order for Meta's LGP glasses. Two months later, Satair signed an agreement to become the exclusive distributor of the LGP frames, paying Meta a C\$1.3 million fee for the privilege. Two months after that, Satair advanced \$500 thousand (C\$655 thousand) in cash for the July purchase order. To date, of the \$2 million order, only C\$34 thousand has been filled, with about half a million dollars remaining an operating liability. The exclusivity fee, meanwhile, was booked by Meta as deferred revenue, which it continues to recognize at the current time. It turns out that Satair essentially funded Meta to the tune of C\$2 million in return for 50 pairs of overpriced glasses to which plenty of cheaper and better alternatives exist (more on that below).

The relationships with Lockheed and Satair provided Meta with two cash infusions totaling C\$7.5 million that the company was able to *also* conveniently recognize as "development revenue" spread out over years, *ironically without ever actually developing anything of value*. Another creative source of funding for Meta over the years has been a variety of Canadian government-affiliated investments and loans:

- Between 2013 and 2019, the Atlantic Canada Opportunities Agency (ACOA), a Canadian government regional development agency, lent C\$6.8 million to Meta, almost entirely in the form of interest free loans, and almost all of which is still outstanding. The lion's share of these loans C\$6 million was meant to support the commercialization of the Lamda Guard laser protection shields, a project subsequently dropped by Meta, and the LGP glasses, which Meta has been unsuccessful in commercializing.
- Sustainable Development Technology Canada (SDTC), a Canadian government-sponsored foundation that funds "clean-tech" startups, agreed to invest C\$5.4M in Meta in late 2017 to fund expenses related to a project titled "Enabling solar flight: a testing ground for lightweight and efficient solar panels." As with the Lockheed investment, this was over 3 years after Lambda Solar was no longer active, so it's not clear what Meta was going to do with the money. In the end, SDTC only invested C\$1.99M, seemingly because Meta was not meeting its end of the deal, and there's since been no disclosure from Meta as to how, or if, the project is advancing.

(Emphasis added.)

151. The Kerrisdale Report further noted problems with the Company's products, and the commercialization of these products, as follows:

Meta's Current "Operations" are a Collection of Hopeless, Fake, and Obsolete Science Experiments

Meta's press releases and recent filings are meant to give (mostly retail) investors the impression of an advanced materials company with proprietary "nano" technology that can be applied to making progress in fields like medtech, automotive, 5G telecom, and "augmented reality." If those sound like industries that coincidentally are expected to have the most exciting growth opportunities right now, and have therefore garnered the most generous valuations, that's not a coincidence. As Meta's experience with Lamda Solar and Lamda Lux have shown, the company has a track record of making misleading announcements and proclamations around its capabilities in trendy industries, such as solar and LED lighting ten years ago, only to quietly fail and move on to promoting the next breakthrough. But as with Solar and Lux, we expect Meta's current businesses — to the extent they really exist — to wallow in irrelevance.

(Emphasis added.)

152. Concerning the Company's efforts to develop MetaAir glasses, the Kerrisdale Report stated as follows:

We can't find any record of Satair's blog posts marketing metaAIR glasses, and it's difficult to explain why, if Meta really had completed the construction of a production facility, they didn't fill Satair's C\$2 million purchase order of which Satair had already provided a cash down payment of C\$500 thousand! If the tens of millions of dollars that were raised explicitly for the development and commercialization of this technology over the last seven years were really invested for that purpose, Meta's inability to manufacture the metaAIR glasses at any level of scale reflects the magnitude of its operational ineptitude. It also suggests that, consistent with its longstanding practice, Meta may have greatly exaggerated its accomplishment of completing a production facility.

It's notable that the metaAIR product is not even very good. The underlying holographic technology, which involves using lasers to alter the optical properties of transparent light-sensitive polymers that comprise a thin film, is difficult and expensive to implement. It's also complete overkill for a niche product with a lot of competition from cheaper and lower-tech alternatives that happen to do a much better job at protecting pilots' eyes from potential laser strikes. Dye-based lenses, such as those manufactured by Gentex and Revision, offer better durability, protection from multiple angles, and protection from a range of dangerous wavelengths, all for 15% of the price for which the metaAIR frames sell. Non-holographic thin-film options, such as those from Iridian and PerriQuest effectively offer the same protection as metaAIR lenses, also for 10-15% of the price. The metaAIR glasses are expensive, lack peripheral vision

protection, are extremely vulnerable to scratching, and were only developed to protect from green-wavelength lasers (whereas the competitors mentioned here also offer protection from blue and red wavelengths). Even if Meta could figure out how to make them, they probably wouldn't sell anyway.

Meta's latest absurd claim is that it will use its holographic "expertise" to improve augmented reality (AR) eyewear. But holography for AR is a commoditized and widely available technology, already incorporated in AR devices by large (and competent) technology companies like Cisco and Microsoft, while Facebook is already knee-deep into developing the next generation of holographic AR. It's laughable to expect that Meta Materials will be able to develop any AR technology of value when it can't even master basic holography to compete with niche sunglasses manufacturers.

(Emphasis added.)

153. The Kerrisdale also revealed that the Company's representations regarding its efforts to develop a non-invasive glucose sensing prototype were deceptive and misleading, as follows:

Meta's med-tech segment is a scam

Meta's "Wireless Sensing" business is the old MediWise, a small UK medical technology company acquired by Meta in July 2018 for C\$4 million. Digging into the MediWise story revealed a familiar pattern of smoke and mirrors that Meta exhibited in its other segments, though with the added bonus of a questionable set of related party transactions.

MediWise was founded in 2010 by Meta's CEO, George Palikaras.

* * *

But gluco WISE didn't exist. In fact, though gluco WISE remains the centerpiece of Meta's "Wireless Sensing" technology, it still doesn't exist. And it never will. John L. Smith, an accomplished research scientist and medtech executive has, for the last 15 years, updated his synopsis of the quest to invent a non-invasive glucose monitor. Smith documents close to a dozen different proposed modalities and dozens of different companies' attempts. While Smith is agnostic as to whether such a feat is possible, his research makes it clear that it's never been done and, as of the present time, there's no sign that anyone is even close to the achievement. gluco WISE is actually just a bit player in the long history of exaggerated claims of having developed a non-invasive glucose monitor. Smith recounts how Medi Wise originally said they expected to begin taking "preorders" for gluco WISE in late 2016, but of course nothing ever came of that. Smith shows how this is a common pattern in the field, as these sorts of

announcements by small companies have "perennially... been premature and meant to generate hype."

* * *

This past July, Meta announced that it "completed a UK-funded project towards developing non-invasive glucose sensing system." In the first paragraph of the press release, *Meta proclaimed that it completed a project to "develop a non-invasive glucose sensing prototype*, which combined radio wave and optical sensors to improve accuracy in predicting glucose level changes." Only later on does it become a bit clearer that the "improved accuracy" is not compared to traditional glucose monitoring but to glucose monitoring using just one of the two sensor methodologies used in the project.

The press release also depicts computer-generated pictures of the monitoring system – which doesn't actually exist – for promotional purposes [images omitted]. Most laughably, the underlying scientific study to which the press release links indicates that the project basically just tested whether some labrigged sensors can detect changes in the concentrations of glucose in solutions composed of only glucose and water, and using concentrations that ranged 2-50x normal blood-glucose levels. And even then, the sensors weren't very accurate. The audacity of using measurements of glucose in water to suggest progress in measuring blood glucose through the skin barrier is hard to comprehend. The proclamations are so misleading that they should deem suspect almost any "scientific" claim that Meta makes.

* * *

While "wireless sensing" may not seem like one of the more prominent parts of Meta Materials, we think that Palikaras' track record here is reflective of the same general approach we described with holography: the products being promoted either don't exist or are grossly overstated, the underlying scientific effort is a sham, and all of it is enmeshed in a complicated series of financial transactions that seem more related to enriching management than developing any profitable business.

(Emphasis added.)

154. The Kerrisdale Report further revealed that, according to sources at the University of Michigan, the Company had ceased licensing a key patent "years ago," and had all but ceased efforts to develop and commercialize NanoWeb:

NanoWeb hasn't progressed since 2014, Meta seems to have no intention of commercializing it having ceased licensing a key patent, and it's obsolete anyway

Meta's lithography segment is primarily composed of NanoWeb, a conductive TTF technology that it obtained when it acquired Rolith Incorporated in 2016.

* * *

... [T]he overall conductive TTF sector has rapidly progressed while NanoWeb has laid dormant. At the current time, there is no NanoWeb spec sheet to be found, and Meta's website says that NanoWeb transparent conductors are "coming soon!" As of March 2020, Meta stated that its "labs in Pleasanton, California can produce a meter long sample of NanoWeb for a variety of applications." Those meter-long samples were the subject of the Rolith scientists' 2014 paper referenced above, so it's clear that not much has changed in the intervening 6 years.

Most recently, Meta used \$72 million of the \$140 million in cash on its balance sheet to buy Nanotech, a Canadian penny-stock company that manufactures anticounterfeit films that can be used with paper currency or luxury consumer goods. Meta has tried to claim that there are synergies between the lithography capabilities possessed by Nanotech and the lithography technology needed to scale and commercialize Nanoweb. But we spoke with several of NanoWeb's founding scientists, none of whom have remained at Meta since the 2016 acquisition, and they explained that they're extremely familiar with Nanotech's rudimentary technology and that it would make no sense to even try to repurpose any of Nanotech's manufacturing methods for the purpose of commercializing NanoWeb. Meta's pronouncements conflating the two production processes are indicative of Meta's management team either misleading investors or having no idea about what's involved in commercializing NanoWeb and manufacturing it at scale.

Even if Meta wanted to commercialize NanoWeb, and knew how to do it, one notable obstacle laying in its path relates to intellectual property. In late 2012, Rolith licensed a critical patterning method patent from the University of Michigan that was meant to be used in its lithography process. We discussed this with members of Jay Guo's lab, and they told us that when they inquired with the university's office that arranges IP licenses, they were told that Meta stopped paying for the license "years ago." The fact pattern – zero development of NanoWeb, acquisition that has nothing to do with NanoWeb, and cessation of a critical patent license – leads us to believe that Meta's management has no intention of ever commercializing NanoWeb at all, and is using the same promotional playbook it's used in the rest of its business since 2012. It's no wonder Rolith's key founding scientists resigned from Meta in 2018.

(Emphasis added.)

155. On the news contained in the Kerrisdale Report, the price of the Company's common stock fell from \$3.09 per share on December 13, 2021, to close December 14, 2021 at \$2.91 per share, an \$0.18 or a 5.8% decline.

DAMAGES TO META MATERIALS

- 156. As a direct and proximate result of the Individual Defendants' misconduct, Meta Materials has lost and expended, and will lose and expend, many millions of dollars.
- 157. Such expenditures include, but are not limited to, legal fees associated with the Securities Class Action filed against the Company and four of the Individual Defendants, legal fees associated with the SEC investigation, and amounts paid to outside lawyers, accountants, and investigators in connection thereto.
- 158. Such losses include, but are not limited to, handsome compensation and benefits paid to the Individual Defendants who breached their fiduciary duties to the Company, including bonuses tied to the Company's attainment of certain objectives, and benefits paid to the Individual Defendants who breached their fiduciary duties to the Company, including in connection with the Merger and with the 2021 Plan.
- 159. As a direct and proximate result of the Individual Defendants' conduct, Meta Materials has also suffered and will continue to suffer a loss of reputation and goodwill, and a "liar's discount" that will plague the Company's stock in the future due to the Company's and their misrepresentations and the Individual Defendants' breaches of fiduciary duties and unjust enrichment.

DERIVATIVE ALLEGATIONS

160. Plaintiff brings this action derivatively and for the benefit of Meta Materials to

redress injuries suffered, and to be suffered, because of the Individual Defendants' breaches of their fiduciary duties as directors and/or officers of the Company, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, and violations of the Exchange Act, as well as the aiding and abetting thereof.

- 161. Meta Materials is named solely as a nominal party in this action. This is not a collusive action to confer jurisdiction on this Court that it would not otherwise have.
- 162. Plaintiff is, and has continuously been at all relevant times, a shareholder of the Company. Plaintiff will adequately and fairly represent the interests of Meta Materials in enforcing and prosecuting its rights, and, to that end, has retained competent counsel, experienced in derivative litigation, to enforce and prosecute this action.

DEMAND FUTILITY ALLEGATIONS

- 163. Plaintiff incorporates by reference and realleges each and every allegation stated above as if fully set forth herein.
- 164. A pre-suit demand on the Board of Meta Materials is futile and, therefore, excused. At the time of filing of this action, the Board consists of Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar (collectively, the "Directors"). Plaintiff needs only to allege demand futility as to four of the seven Directors that were on the Board at the time this action was commenced.
- 165. Demand is excused as to all of the Directors because each of them faces, individually and collectively, a substantial likelihood of liability as a result of the scheme they engaged in knowingly or recklessly to cause or permit the Company to make false and misleading statements and omissions of material facts. This renders the Directors unable to impartially investigate the charges and decide whether to pursue action against themselves and

the other perpetrators of the scheme.

166. In complete abdication of their fiduciary duties, the Directors either knowingly or recklessly participated in making and/or causing the Company to make the materially false and misleading statements alleged herein. The fraudulent scheme was, *inter alia*, intended to make the Company appear more profitable and attractive to investors. As a result of the foregoing, the Directors breached their fiduciary duties, face a substantial likelihood of liability, are not disinterested, and demand upon them is futile, and thus excused.

Additional reasons that demand on Defendant Palikaras is futile follow. 167. Defendant Palikaras has served as the Company's CEO and President since the Merger in June 2021. Previously, he served as the CEO and President of Metamaterial from 2011 until the Merger. As such, the Company provides Defendant Palikaras with his principal occupation for which he receives lucrative compensation. Thus, as the Company admits, he is a nonindependent director. As CEO, Defendant Palikaras was ultimately responsible for all of the false and misleading statements and omissions that were made by or on behalf of the Company following the Merger, including those contained in the 2Q21 10-Q and the 3Q21 10-Q, which Defendant Palikaras signed and for which he signed SOX certifications. In addition, he solicited the 2021 Proxy Statement which contained false and misleading elements that contributed, inter alia, to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As a director and the Company's highest officer, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. Furthermore, Defendant Palikaras is a defendant in the Securities Class

Action. For these reasons, too, Defendant Palikaras breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.

Defendant Christilaw has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. She is also Chair of the Human Resources and Compensation Committee and a member of both the Audit Committee and the Corporate Governance and Nominating Committee. Defendant Christilaw has received and continues to receive significant compensation for her role as a director. In addition, she solicited the 2021 Proxy Statement, that contributed, *inter alia*, to her reelection to the Board and to shareholders approving the 2021 Plan, under which she receives compensation that is unjust in light of her misconduct. As a trusted Company director, she conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded her duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded her duties to protect corporate assets. For these reasons, too, Defendant Christilaw breached her fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon her is futile and, therefore, excused.

169. Additional reasons that demand on Defendant Guitton is futile follow. Defendant Guitton has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also a member of both the Audit Committee and the Corporate Governance and Nominating Committee. Defendant Guitton has received and continues to receive significant compensation for his role as a director. In addition, he solicited the 2021 Proxy Statement, which contained false and misleading elements that, *inter alia*,

contributed to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As a trusted Company director, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. For these reasons, too, Defendant Guitton breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.

- 170. Additional reasons that demand on Defendant Hannah is futile follow. Defendant Hannah has served as a Company director since the June 2021 Merger. He is also Chair of the Audit Committee. Defendant Hannah has received and continues to receive significant compensation for his role as a director. In addition, he solicited the 2021 Proxy Statement, which contained false and misleading elements that, *inter alia*, contributed to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As a trusted Company director, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. For these reasons, too, Defendant Hannah breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.
- 171. Additional reasons that demand on Defendant Karsbo is futile follow. Defendant Karsbo has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also Chair of the Corporate Governance and

Nominating Committee and a member of the Human Resources and Compensation Committee. Defendant Karsbo has received and continues to receive significant compensation for his role as a director. In addition, he solicited the 2021 Proxy Statement, which contained false and misleading elements that, *inter alia*, contributed to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As a trusted Company director, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. For these reasons, too, Defendant Karsbo breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.

172. Additional reasons that demand on Defendant Leslie is futile follow. Defendant Leslie has served as a Company director since the June 2021 Merger and was a Metamaterial director from March 2020 until the Merger. He is also a member of the Human Resources and Compensation Committee. Defendant Leslie has received and continues to receive significant compensation for his role as a director. In addition, he solicited the 2021 Proxy Statement, which contained false and misleading elements that, *inter alia*, contributed to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As a trusted Company director, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. For these reasons,

too, Defendant Leslie breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.

- 173. Additional reasons that demand on Defendant Ramkumar is futile follow. Defendant Ramkumar has served as a Chairman of the Board since the June 2021 Merger and was Metamaterial's Chairman from March 2020 until the Merger. Defendant Ramkumar has received and continues to receive significant compensation for his role as Chairman. In addition, he solicited the 2021 Proxy Statement, which contained false and misleading elements that, *inter alia*, contributed to his reelection to the Board and to shareholders approving the 2021 Plan, under which he receives compensation that is unjust in light of his misconduct. As trusted Board Chairman, he conducted little, if any, oversight of the Company's engagement in the scheme to make false and misleading statements, consciously disregarded his duties to monitor such controls over reporting and engagement in the scheme, and consciously disregarded his duties to protect corporate assets. For these reasons, too, Defendant Ramkumar breached his fiduciary duties, faces a substantial likelihood of liability, is not independent or disinterested, and thus demand upon him is futile and, therefore, excused.
 - 174. Additional reasons that demand on the Board is futile follow.
- other and the other Individual Defendants that preclude them from acting independently and in the best interests of the Company and the shareholders. Directors Palikaras, Christilaw, Guitton, Karsbo, Leslie, and Ramkumar, and Defendant Rice (collectively, the "Metamaterial Defendants"), all worked at Metamaterial prior to the Merger, and worked with the Torchlight Defendants to effect the Merger, which is now the subject of an SEC investigation. Moreover, they facilitated and/or knew of the Torchlight Defendants' engagement in the Overpayment

Misconduct, in connection with the Merger. Thus, they aided and abetted the Torchlight Defendants' breaches of fiduciary duty. Accordingly, they are unlikely to investigate, or file an action concerning, their own actions in connection to the Merger. Moreover, Director Karsbo worked at Satair for almost 40 years in various management roles, until 2019. As such, Defendant Karsbo was in a position of control and authority at Satair when it signed a \$2 million purchase order with the Company, the problems with which contract are detailed in the Kerrisdale Report. Likewise, Defendant Guitton, on the Company's website,⁵ is described as the chairman of Lamda Guard Technologies Ltd. ("Lamda"). The 2021 Proxy Statement reveals that Lamda owned 22,982,397 shares of the Company's common stock—as of October 25, 2021 and that Lamda is "a company controlled by [Defendant] Palikaras and his wife." Thus, Defendant Palikaras and Defendant Guitton are mutually unable to investigate and consider allegations against one another impartially and independently. These conflicts of interest precluded the Directors from adequately monitoring the Company's operations and internal controls and calling into question each other's and the remaining Individual Defendants' conduct. Thus, any demand on the Directors would be futile.

176. Defendants Christilaw, Guitton, and Hannah (as Chair) (collectively, the "Audit Committee Defendants"), served on the Company's Audit Committee during the Relevant Period. The Audit Committee Defendants violated the Audit Committee Charter by engaging in or permitting the scheme to cause the Company to issue materially false and misleading statements to the investing public and to facilitate and disguise the Individual Defendants' violations of law, including breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, and violations of the Exchange Act. In addition, the

⁵ https://metamaterial.com/about-us/directors/maurice-guitton/ (last visited Jan. 12, 2022).

Audit Committee Defendants violated the Audit Committee Charter by failing to adequately oversee the integrity of the Company's public disclosures, to adequately oversee the Company's risk assessments and risk management functions, and to adequately oversee the Company' internal controls. Thus, the Audit Committee Defendants breached their fiduciary duties, are not disinterested, and demand is excused as to them.

- 177. In violation of the Code of Conduct, the Directors engaged in or permitted the scheme to cause the Company to issue materially false and misleading statements to the investing public and to facilitate and disguise the Individual Defendants' violations of law, including breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, and violations of the Exchange Act. In addition, the Directors violated the Code of Conduct by failing to act honestly and ethically; to ensure accurate public disclosures; to comply with all applicable laws, rules, and regulations; to avoid conflicts of interest; and to report known violations of the Code of Conduct and the law.
- 178. Meta Materials has been and will continue to be exposed to significant losses due to the wrongdoing complained of herein, yet the Directors have not filed any lawsuits against themselves or others who were responsible for that wrongful conduct to attempt to recover for Meta Materials any part of the damages Meta Materials suffered and will continue to suffer thereby. Thus, any demand upon the Directors would be futile.
- 179. The acts complained of herein constitute violations of fiduciary duties owed by Meta Materials' officers and directors, and these acts are incapable of ratification.
- 180. The Directors may also be protected against personal liability for their acts of mismanagement and breaches of fiduciary duty alleged herein by directors' and officers' liability insurance if they caused the Company to purchase it for their protection with corporate funds,

i.e., monies belonging to the stockholders of Meta Materials. If there is a directors' and officers' liability insurance policy covering the Directors, it may contain provisions that eliminate coverage for any action brought directly by the Company against the Directors, known as, *inter alia*, the "insured-versus-insured exclusion." As a result, if the Directors were to sue themselves or certain of the officers of Meta Materials, there would be no directors' and officers' insurance protection. Accordingly, the Directors cannot be expected to bring such a suit. On the other hand, if the suit is brought derivatively, as this action is brought, such insurance coverage, if such an insurance policy exists, will provide a basis for the Company to effectuate a recovery. Thus, demand on the Directors is futile and, therefore, excused.

- 181. The Individual Defendants' conduct described herein and summarized above could not have been the product of legitimate business judgment as it was based on bad faith and intentional, reckless, or disloyal misconduct. Thus, none of the Directors can claim exculpation from their violations of duty pursuant to the Company's charter (to the extent such a provision exists). As all of the Directors, and if not all at least a majority, face a substantial likelihood of liability, they are self-interested in the transactions challenged herein and cannot be presumed to be capable of exercising independent and disinterested judgment about whether to pursue this action on behalf of the shareholders of the Company. Accordingly, demand is excused as being futile.
- 182. If there is no directors' and officers' liability insurance, then the Directors will not cause Meta Materials to sue the Individual Defendants named herein, since, if they did, they would face a large uninsured individual liability. Accordingly, demand is futile in that event, as well.

183. Thus, for all of the reasons set forth above, all of the Directors, and, if not all of them, at least four of the Directors, cannot consider a demand with disinterestedness and independence. Consequently, a demand upon the Board is excused as futile.

FIRST CLAIM

Against Defendants McCabe, Brda, Cook, Graves, Zyngier,

Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar for Violations of Section 14(a) of the Exchange Act

- 184. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 185. Section 14(a) of the Exchange Act, 15 U.S.C. § 78n(a)(1), provides that "[i]t shall be unlawful for any person, by use of the mails or by any means or instrumentality of interstate commerce or of any facility of a national securities exchange or otherwise, in contravention of such rules and regulations as the [SEC] may prescribe as necessary or appropriate in the public interest or for the protection of investors, to solicit or to permit the use of his name to solicit any proxy or consent or authorization in respect of any security (other than an exempted security) registered pursuant to section 12 of this title [15 U.S.C. § 781]."
- 186. Rule 14a-9, promulgated pursuant to § 14(a) of the Exchange Act, provides that no proxy statement shall contain "any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading." 17 C.F.R. § 240.14a-9.
- 187. Under the direction and watch of Defendants McCabe, Brda, Cook, Graves, Zyngier, the Merger Proxy Statement failed to disclose that: (1) the Merger was being effected

under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of Metamaterial's deals with certain clients, such as Lockheed Martin; (3) the Company overstated Metamaterial's ability to commercialize and manufacture its products; (4) Metamaterial's products were not as novel or as useful as described; (5) Metamaterial's products were so expensive as to materially hamper their competitiveness; (6) the Company failed to maintain internal controls.

- In the exercise of reasonable care, Defendants McCabe, Brda, Cook, Graves, Zyngier should have known that by misrepresenting or failing to disclose the foregoing material facts, the statements contained in the Merger Proxy Statement were materially false and misleading. The misrepresentations and omissions were material to Plaintiff in voting on the matters set forth for shareholder determination in the Merger Proxy Statement, including but not limited to, the approval of the three proposals necessary to effectuate the Merger and the approval, on an advisory basis, of the "golden parachute" compensation of, *inter alia*, Defendant Brda.
- 189. The false and misleading elements of the Merger Proxy Statement, led Company shareholders to, *inter alia*: approve the three proposals necessary to effectuate the Merger and approve, on an advisory basis, the "golden parachute" compensation of, *inter alia*, Defendant Brda who was breaching his fiduciary duties to the Company.
- 190. Under the direction and watch of Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar, the 2021 Proxy Statement failed to disclose that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and

Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls.

- Ramkumar also caused the 2021 Proxy Statement to be false and misleading by failing to disclose that: (1) the Board's, and its committees', risk oversight functions were not being exercised as described, as evidenced by the occurrence of the wrongdoing alleged herein, which involved members of the Board; (2) though the 2021 Proxy Statement claimed its Code of Conduct applied to the Company's officers and directors, the Individual Defendants violated the Code of Conduct without consequence; and (3) rather than seeking approval of the 2021 Plan merely to attract, retain, and incentivize talent, Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar were improperly interested in increasing the compensation they could receive from the Company by seeking shareholder approval of the 2021 even as they breached their fiduciary duties to the Company.
- 192. In the exercise of reasonable care, Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar should have known that by misrepresenting or failing to disclose the foregoing material facts, the statements contained in the 2021 Proxy Statement were materially false and misleading. The misrepresentations and omissions were material to Plaintiff in voting on the matters set forth for shareholder determination in the 2021 Proxy Statement, including but not limited to, the election of directors and the consideration of the 2021 Plan.
- 193. The false and misleading elements of the 2021 Proxy Statement, led Company shareholders to, *inter alia*: (1) elect Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo,

Leslie, and Ramkumar, even though they were breaching their fiduciary duties to the Company, and; (2) approve the 2021 Plan, granting Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, Ramkumar, and Rice further unjust compensation even as they breached their fiduciary duties to the Company.

- 194. The Company was damaged as a result of Defendants McCabe, Brda, Cook, Graves, Zyngier's and Defendants Palikaras, Christilaw, Guitton, Hannah, Karsbo, Leslie, and Ramkumar's material misrepresentations and omissions in the Merger Proxy Statement and/or the 2021 Proxy Statement, respectively.
 - 195. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

SECOND CLAIM

Against Individual Defendants for Breach of Fiduciary Duties

- 196. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 197. Each Individual Defendant owed to the Company the duty to exercise candor, good faith, and loyalty in the management and administration of the Company's business and affairs.
- 198. Each of the Individual Defendants violated and breached their fiduciary duties of candor, good faith, loyalty, reasonable inquiry, oversight, and supervision.
- 199. The Individual Defendants' conduct set forth herein was due to their intentional or reckless breach of the fiduciary duties they owed to the Company, as alleged herein. The Individual Defendants intentionally or recklessly breached or disregarded their fiduciary duties to protect the rights and interests of the Company.

- 200. In breach of their fiduciary duties to the Company, the Torchlight Defendants engaged in the Overpayment Misconduct.
- 201. In breach of their fiduciary duties owed to the Company, the Individual Defendants willfully or recklessly made and/or caused the Company to make false and misleading statements and omissions of material fact that failed to disclose, *inter alia*, that: (1) the Merger was effected under conditions which were likely to, and ultimately did, result in an SEC investigation; (2) the Company overstated the terms of its business contacts and arrangements with certain clients, such as Lockheed Martin; (3) the Company overstated its and Metamaterial's ability to commercialize and manufacture products; (4) its and Metamaterial's products were not as novel or as useful as described; (5) the expense of the Company's and Metamaterial's products materially hampered their competitiveness; and (6) the Company failed to maintain internal controls. As a result of the foregoing, the Company's public statements were materially false and misleading at all relevant times.
- 202. The Individual Defendants failed to correct and caused the Company to fail to rectify any of the wrongs described herein or correct the false and misleading statements and omissions of material fact referenced herein, rendering them personally liable to the Company for breaching their fiduciary duties.
- 203. Also in breach of their fiduciary duties, the Individual Defendants failed to maintain an adequate system of oversight, disclosure controls and procedures, and internal controls.
- 204. In yet further breach of their fiduciary duties, during the Relevant Period, two of the Individual Defendants engaged in lucrative insider sales, netting proceeds of over \$5.7

million., while the price of the Company's common stock was artificially inflated due to the false and misleading statements of material fact discussed herein.

- 205. The Individual Defendants had actual or constructive knowledge that the Company issued materially false and misleading statements, and they failed to correct the Company's public statements. The Individual Defendants had actual knowledge of the misrepresentations and omissions of material facts set forth herein, or acted with reckless disregard for the truth, in that they failed to ascertain and to disclose such facts, even though such facts were available to them. Such material misrepresentations and omissions were committed knowingly or recklessly and for the purpose and effect of artificially inflating the price of the Company's securities and disguising insider sales. Moreover, the Individual Defendants had actual knowledge that internal controls were not adequately maintained, or acted with reckless disregard for the truth, in that they caused the Company to fail to maintain adequate internal controls, even though such facts were available to them. The Individual Defendants, in good faith, should have taken appropriate action to correct the scheme alleged herein and to prevent it from continuing to occur.
- 206. These actions were not a good-faith exercise of prudent business judgment to protect and promote the Company's corporate interests.
- 207. As a direct and proximate result of the Individual Defendants' breaches of their fiduciary obligations, the Company has sustained and continues to sustain significant damages. As a result of the misconduct alleged herein, the Individual Defendants are liable to the Company.
 - 208. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

THIRD CLAIM

Against Individual Defendants for Unjust Enrichment

- 209. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 210. By their wrongful acts, violations of law, and false and misleading statements and omissions of material fact that they made and/or caused to be made, the Individual Defendants were unjustly enriched at the expense of, and to the detriment of, the Company.
- 211. The Individual Defendants either benefitted financially from the improper conduct and their making lucrative insider sales, received unjustly lucrative bonuses tied to the false and misleading statements, or received bonuses, stock options, or similar compensation, including under the 2021 Plan, from the Company that was tied to the performance or artificially inflated valuation of the Company, or received compensation that was unjust in light of the Individual Defendants' bad faith conduct.
- 212. Plaintiff, as a shareholder and representative of Meta Materials, seeks restitution from the Individual Defendants and seeks an order from this Court disgorging all profits—including from insider sales, benefits, and other compensation, including any performance-based or valuation-based compensation—obtained by the Individual Defendants due to their wrongful conduct and breach of their fiduciary duties.
 - 213. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

FOURTH CLAIM

Against the Individual Defendants for Abuse of Control

214. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.

- 215. The Individual Defendants' misconduct alleged herein constituted an abuse of their ability to control and influence the Company, for which they are legally responsible.
- 216. As a direct and proximate result of the Individual Defendants' abuse of control, the Company has sustained significant damages. As a result of the misconduct alleged herein, the Individual Defendants are liable to the Company.
 - 217. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

FIFTH CLAIM

Against the Individual Defendants for Gross Mismanagement

- 218. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 219. By their actions alleged herein, the Individual Defendants, either directly or through aiding and abetting, abandoned and abdicated their responsibilities and fiduciary duties with regard to prudently managing the assets and business of the Company in a manner consistent with the operations of a publicly-held corporation.
- 220. As a direct and proximate result of the Individual Defendants' gross mismanagement and breaches of duty alleged herein, the Company has sustained and will continue to sustain significant damages.
- 221. As a result of the misconduct and breaches of duty alleged herein, the Individual Defendants are liable to the Company.
 - 222. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

SIXTH CLAIM

Against Individual Defendants for Waste of Corporate Assets

- 223. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 224. As a further result of the foregoing, the Company will incur many millions of dollars of legal liability and/or costs to defend unlawful actions (as evidenced, for example, by the Securities Class Action and the SEC investigation), to engage in internal investigations, and to lose financing from investors and business from future customers who no longer trust the Company and its products.
- 225. As a result of the waste of corporate assets, the Individual Defendants are each liable to the Company.
 - 226. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

SEVENTH CLAIM

Against Defendants Palikaras, Rice, McCabe, and Brda for Contribution Under Sections 10(b) and 21D of the Exchange Act

- 227. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 228. Meta Materials, along with Defendants Palikaras, Rice, McCabe, and Brda, are named as defendants in the Securities Class Action, which asserts claims under the federal securities laws for violations of Sections 10(b) and 20(a) of the Exchange Act, and SEC Rule 10b-5 promulgated thereunder. If and when the Company is found liable in the Securities Class Action for these violations of the federal securities laws, the Company's liability will be in whole or in part due to Defendants Palikaras's, Rice's, McCabe's, and Brda's willful and/or reckless violations of their obligations as officers and/or directors of the Company.

- 229. Defendants Palikaras, Rice, McCabe, and Brda, because of their positions of control and authority as officers and/or directors of the Company, were able to and did, directly and/or indirectly, exercise control over the business and corporate affairs of the Company, including the wrongful acts complained of herein and in the Securities Class Action.
- 230. Accordingly, Defendants Palikaras, Rice, McCabe, and Brda, are liable under 15 U.S.C. § 78j(b), which creates a private right of action for contribution, and Section 21D of the Exchange Act, 15 U.S.C. § 78u-4(f), which governs the application of a private right of action for contribution arising out of violations of the Exchange Act.
- 231. As such, Meta Materials is entitled to receive all appropriate contribution or indemnification from Defendants Palikaras, Rice, McCabe, and Brda.

EIGHTH CLAIM

Against the Metamaterial Defendants for Aiding and Abetting Breach of Fiduciary Duty

- 232. Plaintiff incorporates by reference and realleges each and every allegation set forth above, as though fully set forth herein.
- 233. The Metamaterial Defendants aided and abetted the Torchlight Defendants who breached their fiduciary duty to the Company.
- 234. The Metamaterial Defendants' misconduct resulted in continuous, connected, and ongoing harm to the Company.
- 235. Specifically, the Metamaterial Defendants promoted the Merger by issuing false and misleading statements concerning Metamaterial's products, operations and business prospects. Moreover, the Metamaterial Defendants controlled and operated Metamaterial, the Company's operational predecessor, and caused Metamaterial to jointly issue press releases

which contained materially false and misleading statements promoting the Company's future operations and prospects.

- 236. The Metamaterial Defendants are jointly and severally liable to the same extent as the Torchlight Defendants are liable for breaches of fiduciary duty as set forth herein or violations of any other laws.
- 237. As a direct and proximate result of the Metamaterial Defendants' aiding and abetting of the Torchlight Defendants' breaches of duty alleged herein, the Company has sustained and will continue to sustain substantial damages.
 - 238. Plaintiff on behalf of Meta Materials has no adequate remedy at law.

PRAYER FOR RELIEF

FOR THESE REASONS, Plaintiff demands judgment in the Company's favor against all Individual Defendants as follows:

- (a) Declaring that Plaintiff may maintain this action on behalf of Meta Materials, and that Plaintiff is an adequate representative of the Company;
- (b) Declaring that the Individual Defendants have breached and/or aided and abetted the breach of their fiduciary duties to Meta Materials;
- (c) Determining and awarding to Meta Materials the damages sustained by it as a result of the violations set forth above from each of the Individual Defendants, jointly and severally, together with pre-judgment and post-judgment interest thereon;
- (d) Directing Meta Materials and the Individual Defendants to take all necessary actions to reform and improve its corporate governance and internal procedures to comply with applicable laws and to protect Meta Materials and its shareholders from a repeat of the damaging events described herein, including, but not limited to, putting forward for

shareholder vote the following resolutions for amendments to the Company's Bylaws and/or

Articles of Incorporation and the following actions as may be necessary to ensure proper

corporate governance policies:

1. a proposal to strengthen the Board's supervision of operations and develop

and implement procedures for greater shareholder input into the policies and

guidelines of the Board;

2. a provision to permit the shareholders of Meta Materials to nominate at

least four candidates for election to the Board; and

3. a proposal to ensure the establishment of effective oversight of compliance

with applicable laws, rules, and regulations.

(e) Awarding Meta Materials restitution from the Individual Defendants, and

each of them;

(f) Awarding Plaintiff the costs and disbursements of this action, including

reasonable attorneys' and experts' fees, costs, and expenses; and

(g) Granting such other and further relief as the Court may deem just and

proper.

JURY TRIAL DEMANDED

Plaintiff hereby demands a trial by jury.

Dated: January 14, 2022

Respectfully submitted,

THE BROWN LAW FIRM, P.C.

/s/ Timothy Brown

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Counsel for Plaintiff

VERIFICATION

I, **Brad Hines** the within am a plaintiff in action. I have reviewed the allegations made in this shareholder derivative complaint, know the contents authorize its filing. To thereof, and those I have personal allegations of which knowledge, I believe those allegations to be true. As to those allegations of which I do not have personal knowledge, I rely upon my counsel and their investigation and believe them to be true.

I declare under penalty of parings that the foregoing is true and correct. Executed this _th day of \(\frac{1/14/2022}{2022} \), 2022.